Patients and Healers in the High Roman Empire

IDO ISRAELOWICH

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Ido Israelowich

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In memory of my father, Victor Israelowich (1948–2012)

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Introduction

Two features of medicine under the High Roman Empire—and, indeed, during classical antiquity more generally—are widely known. First, the practice of medicine was not licensed by the state, and second, physicians were but one group of health care providers among many, including root cutters, gymnastic trainers, dream interpreters, pharmacologists, and priests, to name the most common. This study examines how professional authority was constructed, distinguishes between the categories of health care provider, and explores the interrelations among practitioners of the various professional groups. However, unlike many existing interpretations, this book considers the perspectives of both health care providers and the patients who consumed their services. Because health care involves an interaction between two parties who often have altogether different expectations from their encounters, approaching the subject from both sides of the patient/healer divide is necessary.

Accordingly, the source material considered in this study is extensive and diverse, ranging from the writings of physicians, historians, and poets to testimonies of the sick themselves and various official publications of the Roman state. None of these sources is without faults. The extensive corpus of Galen's work, for example, holds an abundance of information concerning every aspect of Galen's life, philosophy, and career. It reveals many details concerning Galen's training and education, his social standing, his relationships with his colleagues and patients, and even his advice to prospective patients. However, Galen's life and career were hardly representative of an average physician during the High Roman Empire. Likewise, when looking into the testimonies of the sick, which are available mainly through their votive offerings to their healers—whether human or divine—many questions arise: Were the testimonies edited? How trustworthy is their content? What was their impact upon those who saw them? The works of contemporary

historians are also limited in scope, at least to the social historian. No historian during the first three centuries CE composed a social history, and authors who wrote in different genres, such as Lucian, Apuleius, and Aelius Aristides, were not writing on medical issues per se. Official documents (e.g., imperial decrees, edicts, and pieces of legislation) do form an excellent corpus of evidence for the social historian. The imperial government habitually addressed the medical profession in its legislation. It sanctioned midwives for certain legal procedures, and it associated physicians with other professional groups, such as grammarians and sophists, on the one hand, and stone cutters and other artisans, on the other hand. However, the Roman legislator was often silent concerning the reasons that led to each act of legislation, and laws were being continuously published; therefore, the historian must infer the exact circumstances that required a legislative act at a certain point in time. In addition to different genres and authors, the relevant evidence is also complex in terms of form and the interpretation each source requires. Some of these methodological difficulties are common to all aspects of ancient history; others are unique to social history. Inscriptions are seldom preserved intact. Papyri come predominantly from one region in the Roman world. Written works that have survived usually pose textual difficulties. Material evidence requires contextualization in terms of location and prospective viewers. All of these issues are discussed in this study.

What have these various pieces of evidence imparted to us about medicine in Ancient Rome? Medicine as a profession, which was founded upon a specialized educational training and offered a service in return for payment, is unrecorded in Roman history prior to the second half of the third century BCE, when, along with other representatives of Greek culture, Greek physicians arrived in the city of Rome to practice their trade.[1] According to Pliny, the first time a Greek doctor established a practice in Rome he was endowed with Roman citizenship and a surgery at the crossway of Acilius, which was bought for his own use with public money.[2] However, evidence of further institutional intervention in the practice of medicine does not exist until the decline of the Roman Republic and the foundation of the Principate. Greek physicians continued to appear in Rome, particularly during the last Republican century, when members of the Roman elite proved to be keen consumers of their services, but they did so either as slaves or as private individuals who pursued personal gain, with the institutions of the Republic indifferent to their presence. No decrees banned or encouraged their settlement in Rome, no discussion is recorded in the senate about the social and cultural implications of the emergence of this new form of health care, and no piece of legislation concerning this

new vocation was offered for approval. However, the decline of the Roman Republic marked a turning point in the attitude of its institutions. Julius Caesar, Augustus, and later emperors encouraged physicians to migrate to Rome by promising Roman citizenship and immunity from taxes. Later, the Roman government extended this endowment of privileges to physicians who dwelt in all the cities under its rule. These developments within the medical profession thus laid the foundations for medical care during the High Empire.

The institutional perspective alone does not reveal a complete picture of health care during the High Roman Empire. For this book to be a true history of health care, rather than a study of the legal status of doctors under Roman jurisdiction, patients' perspectives must also be taken into consideration. Although a history of health care from an institutional point of view relies on decrees, legislation, and the works of historians, which make general statements, the history of health care from the patients' point of view relies on subjective sources. Furthermore, setting aside Aelius Aristides' *Sacred Tales,* no testimony survives of a patient relating his or her experiences in narrative form. In fact, most of the existing corpora of evidence consist of inscriptions and ex-votos dedications, which the sick devoted to their healers. Such inscriptions reveal the healers' identity, credentials, and skills and occasionally include therapeutic measures but are frustratingly limited as to patients' reasons for approaching a particular health care provider.

Nonetheless, these records of patients' experiences do provide insight into the fashion by which therapeutic authority was presented and understood—what Roy Porter has described as "medical history from below."[3] Moreover, by comparing the testimonies of patients with other sources such as the works of physicians as well as with pieces of legislation, it becomes possible to study the pattern of the dissemination of knowledge and authority in health care. The absence of any form of a licensing system and the transactional nature of the health care process meant that therapeutic authority (e.g., in the form of titles) did not automatically equate to power. The sick were given little institutional assistance in discerning the most suitable form of health care. Having first chosen a particular type of provider, such as a doctor, a gymnastic trainer, or root cutter, a patient next had to select one practitioner from the many available. In this respect, the medical market place acted like any other market. It facilitated "market" transactions and provided guarantees of quality.[4] It was a place in which businesses sold their goods, services, and labor in exchange for money. By reviewing the acts and deliberations of the patients within this market and by asking how they understood medical authority and what guided their choices when seeking cure, the patient as actor emerges.

The measures patients took to fight illness, such as bloodletting, surgery, and various purification rites, might seem extreme to a modern reader. However, extremity is both contextually and culturally determined. This cultural context becomes available through an analysis of the "inner structure" of health care systems, using notions and methodology borrowed from the field of anthropology.[5] Arthur Kleinman defined a health care system as a concept—a conceptual model held by the researcher—rather than as an entity. Scholars, he noted, build this model by learning how the actors in a particular social setting think about health care: by tracing their beliefs about their sickness, the measures they took to tackle it, and their expectations and evaluations of the various types of treatment available to them.[6] In this way, health care systems comply with Clifford Geertz's definition of a cultural system—they are both maps "for" and "of" a special area of human behavior.[7] As Kleinman noted: "In the same sense in which we speak of religion or language or kinship as cultural systems, we can view medicine as a cultural system, a system of symbolic meanings anchored in particular arrangements of social institutions and patterns of interpersonal interactions."[8] The health care system integrates the health-related components of a society, including patterns of beliefs about the causes of illness; norms governing choice and evaluation of treatment; and social status, roles, power relationships, interaction settings, and institutions.[9] Because both patients and healers are part of this system, neither group can be seen in isolation from the other nor understood outside of this contextual framework. In other words, the perspective of society at large is pertinent for a study of the perspective of each individual, and the social and cultural constructions that form the health care system must be the point of origin for analysis of the experience of an individual, whether patient, healer, or legislator. Thus, Kleinman's notion of the health care system underpins this analysis of health care during the High Roman Empire.

The book will also employ the theoretical concepts of the "explanatory model" and the "semantic network" made popular by medical anthropologists. Illness and disease can themselves be viewed as explanatory models of sickness.[10] In addition, the pioneering work of the American philosopher and sociologist of science Thomas Kuhn has stressed the inherent role played by metaphysics in any kind of scientific research.[11] Kuhn argued that no phenomenon is explicable without the existence of theory and methodology.[12] He used the notion of "paradigms" to describe the conceptual schemes in which any scientific pursuit such as medicine takes place. By shifting his focus from the individual scientist to the community in which the scientist operates, Kuhn was also able to demonstrate just how effectively these par-

adigms manage scientific enterprise; they provide the model from which practice can emerge. Kuhn's work proves beneficial when considering how the various actors in the Roman health care system thought of health care. The use of dreams in therapeutic practice is a good case in point. The interpretation of dreams was widely practiced both in temple medicine and by physicians. Explanations of dreams and the applicability of their content in medical practice, which can be found in medical treatises from the Hippocratics onward, relied on hermetic theories and on the belief in harmony between the micro- and macrocosm.[13] The practice in the temples of Asclepius and other deities suggests that certain dreams were thought to be god-sent, bringing cures from the deity to his supplicants. However, the experiences of patients, which will be discussed further in this book, indicate that the explanations provided by priests and the ones offered by doctors were not contradictory. The patient experience reveals that dream interpretation was being used simultaneously by different groups of health care providers.

The classicist Tamsyn Barton looks into the formation of learning and the acquisition of professional standing in the fields of astrology, medicine, and physiognomics, revealing how apprenticeship and the reliance on personal ties between master and pupil inform "knowledge" in these disciplines.[14] Those sharing a paradigm also shared methods and scientific practice, enabling the continuation of a given scientific tradition.[15] This social mechanism of regulating scientific activity means that science is interwoven within a discourse of power. Barton argued that what becomes defined as "knowledge" is a result of "power," and, in turn, those who are seen as possessors of "knowledge" may participate in power. Considering how society regulates every scientific activity by assigning each of these activities to its appropriate paradigm (medicine, pharmacology, the interpretation of dreams, etc.) reveals how each society developed agreed criteria to distinguish proper praxis in each of these fields from heresies. In the case of ancient medicine, the explanatory model can help to explain etiology, time and mode of symptoms, pathophysiology, course and cause of sickness, and treatment. The semantic network of illness, then, is "a configuration of concepts, symbols and experiences, firmly embedded in culture, the meaning of which becomes clear in interaction."[16]

The history of medicine in classical antiquity is a vast subject, covering social, constitutional, religious, and scientific aspects. This book does not aim to address them all but rather to identify whether a shared belief system underpinned the various instances in which health care was sought and administered during the High Empire. It considers the character of professional authority; the manner by which the sick came to terms with this authority; and the mechanisms that

drove individuals to seek medical aid in particular places, such as temples, bathhouses, and cities. Such a study should yield a better understanding of common perceptions of illness and the modus operandi of the social institutions that dealt with ill health at this time.

An equally important aim of this book is to undertake an analysis of the range of healing activities offered during the High Empire—from drugs and surgery to psychotherapy, supportive care, and healing rituals—and how they were regarded. Modern readers of Celsus's *De Medicina,* particularly the sections depicting surgical procedures (e.g., eye surgery, amputations, and the extraction of missiles during battle), might ask what could induce a patient to undergo such dangerous procedures, likely performed by a person lacking any sort of official credentials. Such concerns were not restricted to modern readers: Cato famously cautioned his son against physicians, reminding him that they alone were legally permitted to kill.[17] The unflattering epithet "the executioner," which was given to Archagatus, Rome's first physician, is reported by Pliny to have been attached to all doctors.[18] Nevertheless, evidence shows that surgical procedures were common; during the High Roman Empire, the imperial medical corps numbered between six hundred and eight hundred physicians in active service.[19] Roman law acknowledged the legitimacy of a child who was born by caesarean section, indicating the feasibility of the operation, and even expected midwives (whose practice, much like that of physicians, was not licensed) to be able to perform it.[20] The case histories of Galen likewise indicate that surgery was widely practiced. Archaeology provides material evidence in the form of elaborate surgical tools from all over the Roman world.[21] Throughout this study, then, particular attention is paid to the nature of therapeutic measures undertaken, how their usefulness was explained by health care providers, and what type of explanation a patient was likely to expect for their use. The management of therapeutic outcomes—including cure, treatment failure, recurrence, chronic illness, impairment, and even death—is also scrutinized.

The history of medicine during the High Empire (and, indeed, this is true for other periods and places) contains a dialectical tension between private and personal experiences of sickness and the socially organized responses to disease available in the Roman health care system. For example, although the experiences Aristides recorded in his *Sacred Tales* are private and very much his own, they do reflect general patterns and existing power structures by depicting figures of authority in the field of health care and by marking these figures as carriers of "knowledge." The means of addressing the tension between "private" and "public" in this study is to focus on the approach of the various actors within the Roman health care sys-

A set of surgical instruments has been found in the Great Baths of the civil Roman town Colonia Ulpia Traiana (close to Vetera castra). Photo by Axel Thünker DGPh; courtesy LVR—LandesMuseum Bonn.

tem toward its authoritative figures; the nature of their authority; the means of disseminating medical information, techniques, and practices; and the characteristics of the interaction between patient and healer. To begin, the first two chapters of the book focus on the identification of medical authority during the High Roman Empire, from both an institutional and the patients' point of view. Chapter 1 charts the establishment of medicine as a profession in Rome and then details how it functioned during the High Empire. Chapter 2 then considers patients' understandings of medical authority, with particular reference to the relationship between temple and scientific medicine.

Next, attention turns to the patient/healer relationship in the various arenas in which health-related activities were undertaken. Focusing on a number of case studies—the home and reproduction, the army, and medical tourism—the book examines the nature of medicine during the period between the middle Republic and the third century CE by reviewing the ontology of health care at this time. The scope of this book prohibits the consideration of every aspect of health care in the High Empire, but these case studies have been selected in order to allow an examination of a broad spectrum of health-related experiences, practitioners, and settings while offering an in-depth and focused analysis.

The first of these case studies, chapter 3, looks at the health-related activities that took place in the *domus,* with particular attention to the various procedures

surrounding childbirth. It examines: (1) the level of medical intervention in the process of childbirth; (2) the influence of related discourses, such as popular morality and law, in shaping the form of medical intervention during childbirth; and (3) the wider effects this intervention had on the medical education of the household members at large. The habit of homebirth and the assistance provided by household members was likely to result in a certain level of anatomical knowledge, although the educative role of homebirth must have been somewhat tempered by the demands of popular morality, which discouraged male presence in the actual room where birth took place. Chapter 3 also considers whether any causal relationship existed between the tendency to have a professional midwife or a doctor present at birth and the subsequent inclination of household members to identify individuals associated with these professions as authorities in offering health care more generally. Furthermore, practical aspects of procreation, such as the legitimacy of heirs and the right of succession, often required the presence of a professional authority during childbirth whose testimony would later be admissible in court. The right granted by Roman law to the man under whose *potestas* the child would be reared to decide whether he would raise the newborn often necessitated a medical report on the infant to be made. These and other issues were contributing factors in shaping the roles of the various participants in the process of childbirth. Their significance, however, was felt beyond the province of childbirth and extended into the wider provision of health care, both within the *domus* and outside. Such themes form the central focus of the chapter.

Chapter 4 considers health care in the Roman army during the High Empire, specifically, how the establishment of a professional army with a permanent medical corps encouraged the spread, codification, and evolution of Greek medicine within the Roman world. The decline of the Roman Republic and the foundation of the Principate marked a turning point in the attitude of the Roman legislator toward health care and its practitioners. The imperial government abandoned the laissez-faire approach that characterized the Republican era and issued a series of laws marking Greek medicine as the preferred method of health care and physicians as its recognized practitioners. A key reason for this shift in policy was the establishment of a large professional army, which required a permanent medical corps. Having discussed the implications of the imperial system of provincial administration on its health care system in chapter 1, chapter 4 focuses on the medical corps itself, the circumstances under which it was formed, and the profound effect it had on the Roman health care system as a whole. An imperial army numbering an estimated three hundred thousand soldiers in active duty required a med-

ical corps of six hundred to eight hundred physicians, who were either recruited as such or trained during their military service.[22] However, the dynamics between doctor and patient in the army were different than in society at large. In civil society, authority lay within the hands of the health care provider, but the power to recognize this authority was left to the patients. In contrast, army doctors were sanctioned by the Roman authorities to offer medical aid within their units, thus significantly diminishing the power of the patient. In addition, the spread of the imperial army throughout large parts of the Roman world, its function as an army of occupation, and its role in executing Roman policy in the provinces placed the army in contact with local populations on a regular basis.[23]

Chapter 5, the last of the case studies, discusses medical tourism. It addresses the appeal of certain places to the sick, the consequences of this kind of tourism on the spread of ideas, and on the role it had in shaping the Roman health care system. In it we learn who undertook this travel and why they thought they would find cures in particular places (and, related to this, how the fame of these places as health care centers spread). This case study aims to emphasize the fact that throughout the Roman world there was one health care system and that it was made out of a network of places and individuals, performing as a unified entity rather than a collection of local ones.[24] A study of the motives that drove the sick to take to the road sheds further light on the notions of health, illness, and medical care that they held. Chapter 5 focuses on three types of *loci:* temples, baths and spas, and cities. These three categories enable a comparison of the different forces active in the field of health care: religious, traditional, and scholastic. Although the geographical setting of these different places might have been identical, their appeal was not. For example, the Pergamene Asclepieion was both a temple and a bath and was also located within a city, but each of these aspects held different attractions for the sick, which may or may not have overlapped. The pull of the city of Pergamum was in harboring a large number of highly reputable physicians who were active both within and outside the temple. The baths at the Asclepieion offered various forms of hydrotherapy, as was common in many Asclepieia. And, of course, the temple itself promised cure by the god. Examining whence the appeal of these *loci* arose and the reasons given by the sick themselves for their journeys shows whether a pilgrimage to a temple, a journey to a spa, or a visit to a famous physician were mutually exclusive and how they were interrelated.

Through analysis of these case studies, the book considers *all* actors involved in health care, including patients and doctors, priests and worshippers, midwives and parturients, legislators and citizens, rulers and subjects. It sheds new light on

prevailing beliefs about sickness in the High Roman Empire, the measures undertaken to tackle it, and expectations and evaluations of the various types of treatment available. Furthermore, it also aims to demonstrate that, rather than a dichotomy existing between temple and scientific medicine, which has been commonly assumed in scholarship on this subject, those seeking health care during the High Roman Empire did not have to choose between mutually exclusive competing disciplines. Instead, the different forms of health care not only coexisted but also shared a common language.

The Identity of Physicians during the High Roman Empire

Physicians had a central place in the so-called medical market place of the High Roman Empire. Initially a Greek form of health care, physicians were already present in the Roman world by the second half of the third century BCE, their popularity growing quickly thereafter. The Greek professional physician in Rome metamorphosed from novelty to commonplace within less than three centuries, and the integration of Greek medicine into the Latin-speaking world is one of the decisive phases in the history of medicine.[1] The Roman world incorporated Greek medicine, alongside its forms of explanation and linguistic expression. Roman authors often used Greek medical vocabulary in their Latin works by transliterating, translating to an existing Latin equivalent, or merely creating Latin words that kept their original Greek meanings.[2] Prior to the introduction of the Greek vocabulary, no discourse existed that exclusively served the field of medicine. This adoption of Greek medical language therefore enabled the establishment of a professional discipline. Philologists have demonstrated that it was common to use medical terms of Greek origin in third-century BCE Rome.[3] Celsus's work *On Medicine* demonstrates just how familiar the Roman world was with Greek medicine and its professional language by the first century CE.[4] Roman society and the Roman state gradually adopted the Greek and Hellenistic social, cultural, and economic institutions that regulated the activity of physicians. In addition, some of the primary means of arranging the provision of medicine within the Roman world—such as the public physician, or *archiatros*—continued to maintain their Greek names, mainly, but not exclusively, in the Greek East.

The influence of Greek culture was equally visible in the practice of health care. Encounters between physicians and their prospective clients continued to occur in public places, like baths and religious healing centers, as was the habit in the Greek cities and the Hellenistic monarchies. City officials enticed physicians to

reside within city limits by offering them honorary titles and financial incentives. The great scholarly and medical centers of Alexandria, Ephesus, Pergamum, and Athens continued, alongside Rome, to house the most renowned doctors and to draw medical students from throughout the Greco-Roman world. Also, without a licensing system in the field of medicine and no legal form to regulate the practice of medicine, the title of "physician" in the Roman world was still self-proclaimed, as it had been in classical Greece and in the Hellenistic era. It was left to society to produce the means of identification for those suitable to offer health care. This chapter aims to uncover the grid of knowledge and of social patterns that turned medicine in its Hellenized form (and physicians who were originally frowned upon and discredited as alien to the Roman *mos maiorum*) into a prominent form of health care under the High Roman Empire, both in practice and as a heuristic model of health, illness, and cure.

The Establishment of Medicine as a Profession in Rome

> Etenim percensere insignia priscorum in his moribus convenit. Cassius Hemina ex antiquissimis auctor est primum e medicis venisse Romam Peloponneso Archagathum Lysaniae filium L. Aemilio M. Livio cos. anno urbis DXXXV, eique ius Quiritum datum et tabernam in compito Acilio emptam ob id publice. vulnerarium eum fuisse egregium, mireque gratum adventum eius initio, mox a saevitia secandi urendique transisse nomen in carnificem et in taedium artem omnesque medicos.[5]
>
> In fact this is the time to review the outstanding features of medical practices in the days of our fathers. Cassius Hemina, one of our first authorities, asserts that the first physician to come to Rome was Archagathus, son of Lysanias, who migrated from the Peloponnesus in the year of the city 535, when Lucius Aemilius and Marcus Livius were consuls. He adds that citizen rights were given to him, and a surgery at the crossway of Acilius was bought with public money for his own use. They say, that he was a wound specialist, and that his arrival at first was wonderfully popular, but presently from his savage use of the knife and cautery he was nicknamed "executioner."

According to Pliny the Elder,[6] the first encounter between the professional physician and Roman society occurred relatively late. If we are to believe Pliny, medical help could only have been obtained in Rome from the nonprofessional health care provider, such as the *paterfamilias,* before 219 BCE.[7] However, the arrival of Archagathus in Rome was not the first instance of the Greek influence on Roman

patterns of belief about the causes of illness, the norms governing their treatment choices, or the criteria by which they evaluated the quality and success of their health care. According to Livy, the Greek deity Apollo the Healer had been summoned to Rome to help the Romans defeat an epidemic as early as 433 BCE.[8] A similar occurrence took place by the end of the third century BCE and was similarly addressed by the Roman religious institutions. According to Valerius Maximus, Rome suffered three years of severe epidemic before its priests decided, in 293 BCE, that the Sibylline books ought to be consulted, after which it was agreed that the deity Asclepius was to be summoned from Epidaurus,[9] and an official embassy was dispatched under the command of Quintus Ogulnius. Asclepius was receptive. In the form of a snake, he was then carried back to Rome. The god himself chose his place of residence on the Tiber Island. The Romans, in turn, honored Asclepius with a temple. Their efforts were not in vain. Asclepius defeated the plague "with miraculous speed" (*mira celeritate*).[10]

The arrival of a Greek professional physician in Rome was seen as a turning point in the history of health care in the Roman world rather than merely another stage in a long process of Greek influence on Roman culture. Although neither the cult of Apollo nor the cult of Asclepius was accompanied by the adoption of Greek medicine as a craft or science, the arrival of Archagathus was something of an innovation, changing the social status of health care providers, their roles, the power relationships that shaped their place within Roman society, the settings of their interactions with patients, and the nature of the institutions in the field of health care. Although the practice of medicine was not unknown in Rome prior to 219 BCE,[11] this was the first time a physician was paid from Roman public funds.[12] The novelty of Archagathus's welcome in Rome did not lie in the Roman attitude toward craftsmanship in general;[13] rather, by giving Archagathus Roman citizenship and a surgery at public expense, the Roman senate was acting like the council of a Greek city in sending for and then paying a resident civic physician.[14]

The inclination of the Roman state to have a paid physician practicing within the city follows preexisting patterns in the Hellenistic world in which certain cities offered special privileges to physicians who were considered "public."[15] Public physicians, as defined by Briau, Vercoutre, Pohl, Cohn-Haft, and later scholars,[16] are those who bore some kind of institutional characteristics as well as titular markings. An institutional characteristic can be attested to in inscriptions that speak of physicians who have been elected, hired, or sent for by some agency of the state.[17] Similarly, a title such as *demosios* (δημόσιος) or *demosieuon* (δημοσιεύον) suggests a public post.[18] If we believe Diodorus, the habit of providing free medical

attendance by the city was established by Charondas, the lawgiver of his native town Catana and other Chalcidic colonies.[19] Diodorus claimed that Charondas exceeded all previous lawgivers by providing private citizens with the services of physicians at the public expense.[20] The first indisputable allusion to a public physician is that of Democedes in Herodotus 3.131 sqq. (sixth century BCE). Although similar arrangements were presumably in place in the following century, no concrete reference was made to a public physician until the production of Aristophanes' *Acharnians* in 425 BCE. Even so, no evidence connects the institution of free medical care alluded to by Diodorus and Herodotus to the widespread Hellenistic phenomenon of physicians bearing the title "public."[21] There is likewise no evidence to suggest that the title *demosios* or *demosieuon* meant a physician whose treatment was given without charge.[22] According to Vivian Nutton, "It would appear that the only certain contractual requirement of a public physician in Greek antiquity was to reside in the community that paid his salary. In return, he was guaranteed an income, which could probably be augmented by fees, and he was not compelled, like many of his colleagues, to wander the Aegean touting for patients." Thus, "the city gained a resident physician of assumed competence, the doctor an assurance against penury."[23]

The arrival of Greek medicine in Rome during the third century BCE, at the height of the Hellenistic era, was not accidental. The Hellenistic world played a seminal role in transmitting onward, among other aspects of Greek culture, the classical texts of Greek medicine; in creating a network of Greek physicians throughout the Hellenistic world; and in anchoring Greek medicine in social and political institutions, such as appointing public physicians in Greek cities, affiliating physicians with museums, sponsoring medical research, and establishing scholarly centers and libraries. New types of evidence began to emerge in abundance, such as the Egyptian papyri and inscriptions, which were produced in the Greek cities in commemoration of individuals, events, or legal decrees.[24] The reliance on documents of an official or mundane nature for writing the history of medicine during the Hellenistic era, such as papyri and inscriptions, which capture legal acts and formal decisions as well as the practices of daily life (rather than the Hippocratic treatises and other literary works, which formed the core of the evidence available for the Greek classical era), reveals how archaic or classical traditions, whether historically based or otherwise, were molded into social and legal institutions under the Hellenistic kingdoms. How influential were these institutions on the Roman conqueror?

The attitude toward health care during the Hellenistic era was shaped by both local and Pan-Hellenic circumstances. In Egypt, for example, where the former Pharaonic government was attentive to the need for health care under its jurisdiction and where current rulers appreciated at least some aspects of the indigenous culture, the Ptolemaic monarchs were inclined to adopt some traditional methods of health care provision. Elsewhere in the Hellenistic world, physicians played an active role in intercity politics. In Egypt, a medical tax (*iatrikon,* ἰατρικόν), which scholars assumed was collected to finance the position of the public physician, attests to a certain level of central administration of health care.[25] This tax was levied on all the inhabitants of the Egyptian *chora,* including the settled soldiers.[26] It has the same name as that levied in the Greek cities to finance the public medical service, and it could hardly have had a different meaning in Egypt. A fourth-century BCE inscription commemorating a treaty between Teos and another city stated that citizens of both cities were to be exempt from taxes in the other, except of the *iatrikon*.[27] At Delphi circa 263 BCE, Philistion and his descendants were exempt from the *iatrikon*.[28] Evidence from the papyri seems to confirm the existence and function of this medical tax.[29] Taken together, the Greek institution of "public physicians" alongside the tax imposed to finance it suggests that when Rome encountered the Greek East and the Hellenistic monarchies, it met a culture in which the provision of health care was in the hands of professionals. Moreover, they were acknowledged as such by both society and the sovereign.

The establishment of the Hellenistic monarchies instigated a change in the image of the physician, from an itinerant practitioner into a citizen of a city.[30] One of the most important reasons for this social shift was the birth of the "*savant de cour*" within the Hellenistic courts.[31] Furthermore, the changes in the image of the physician, particularly one who enjoyed a high professional reputation and social standing, were shaped by the complicated interaction between the traditional Greek civic way of life and the emergence of monarchic powers. Medicine had long been considered an integral component of the Greek *paideia,* and its practice was cemented in the form of the public physician, both of which were seminal aspects of Greek civic life. The association between the practice of medicine and *paideia* is demonstrated through the image of the Hellenistic royal physician.[32] The connection between medicine and *paideia* can also be seen in biographies of prominent physicians, such as Herophilus, Erasistratus, and Asclepiades.[33] In addition, two collections of biographies of physicians from the second century CE, one by Hermmipus of Beirut and the other by Soranus of Ephesus, emphasize the

scholarly affiliation of the physicians whom they portray.[34] Moreover, the foundation of museums during the Hellenistic era allowed further association of physicians with the muses and with scholarly activities. An inscription from Delos named an Alexandrian called Chrysermus, son of Herakleitus, with the city's museum. Chrysermus is described as a relative and adviser of King Ptolemy, in charge of the physicians, and an overseer of the museum (Χρύσερμον Ἡρακλείτου Ἀλεξανδρέα / τὸν συγγενῆ βασιλέως Πτολεμαίου / καὶ ἐξηγητὴν καὶ ἐπὶ τῶν ἰατρῶν / καὶ ἐπιστάτην τοῦ Μουσείου).[35] Despite the paucity of evidence connecting physicians to museums during the Hellenistic era, such evidence can easily be provided for the Roman imperial era. A number of inscriptions depict physicians as members of the museum.[36]

The foundation of the Hellenistic monarchies created new opportunities for practicing physicians in the courts of the new monarchs, particularly those of exceptional skill and reputation. In the Seleucid dynasty, for example, the king's physician often attained high status. Royal physicians were habitually members of the council of the *philoi* and played a vital part in diplomacy and politics.[37] Seleucid monarchs had a personal physician who was often distinguished by the title of "royal physician," such as Simon of Cos, personal physician of Seleucus Nicanor.[38] Although it was unlikely that Erasistratus was himself a royal physician, tradition has it that he cured Antioch, the king's son, from love sickness.[39] The details of this tradition are in doubt, but it is probably based on actual events, whether or not the protagonists were Erasistratus and Antioch.[40] Polybius provides even more revealing proof of the high repute of the royal physician in the Seleucid court in the fifth book of his *Histories*. He recounts how Apollophanes, the royal physician and a great favorite, warned the king against the treachery of Hermias. Having secured the king's ear, Apollophanes and his aids spread a rumor that because the king was suffering from dizziness they had relieved him of his usual civic and military duties. The physicians could, however, allow the king to consult his advisers in the presence of medical counsel.[41] This episode demonstrates that physicians could be found among the king's most intimate circle. King Antioch even dedicated an inscription to Apollophanes in the Asclepieion of Cos, where the physician is depicted as highly skilled and well educated.

To such physicians, the Hellenistic courts promised ideal working conditions of an unprecedented nature. Significantly, the evaluation of these physicians, as well as the titles bestowed upon them, was borrowed from the cultural and institutional world of classical Greece and the *polis*.[42] Although they genuinely needed medical services, the Hellenistic rulers also surrounded themselves with symbols of their

wealth. Scholars—some of whom were physicians—represented cultural riches. In this respect, the upper tier of the Hellenistic physicians was a social novelty. They could have been residents of the city, or, alternatively, they could have been associated strictly with the monarch either as royal physicians or as royal protégés.[43]

Throughout the Hellenistic era, an upper tier of physicians regularly moved between a network of cities, which, in turn, helped to spread medical knowledge and to create a Pan-Hellenic health care system.[44] This mobility is evidenced by the fact that most physicians who were bestowed with honors by a certain city were not natives of it. Even prior to the Hellenistic era, Greek cities would borrow famous physicians, especially from Cos, in times of emergency, such as epidemics and wars, and during great festivals.[45] Massar rightly concludes that this custom demonstrates how the cities summoning a specific physician knew where to find him, which is a further indication of the existence of networks of cities and knowledge.[46] Indeed, one popular means of creating a network of knowledge, which was based on the preexisting network of cities, was the common habit of welcoming a copy of an honorary decree from another city. Physicians honored by such decrees and acting as envoys between cities or leagues were not rarities. This political and cultural system, therefore, allowed and even encouraged the circulation of medical ideas, practices, and personnel between the various cities.[47] In addition, a city or league often sent a physician to another city or league with which it wanted to establish a treaty.

From the time of Archagathus onward, the notion of a physician endorsed by the community became prevalent in the Roman world, where the privileges of public physicians are well attested to, not just by the legal sources and inscriptions, but also in literature. A public physician existed in Marseilles by the time of Strabo and at Cordova some time later.[48] Notably, both cities were originally Greek and maintained a Greek air. Lucian states that "physicians have honors, precedence, immunities, and privileges bestowed on them by states."[49] Galen himself reported that, in his day, many cities provided surgeries where doctors could attend the sick.[50] Furthermore, according to the Arabic biographer al-Mubassir, Galen took the view that a monarch's prime duty was maintaining his subjects' health by providing them with drugs and medical assistance.[51] Although no record of this view exists in Galen's work, such a statement is consistent with the prevailing ethic of benefactions, which dominated the Greco-Roman world at that time.[52]

Cohn-Haft's interpretation of the Roman attitude toward Archagathus as part of a broader Roman shift toward Hellenic culture is compelling. The senate's acts, alongside other contemporary evidence regarding the Greek influence on Roman

society, make the Roman adoption of a Greek institution a highly plausible explanation for the Archagathus episode. The change from country life to an urban environment and the influence of Greek culture upon Roman society caused the professional physician—in its Greek meaning and form—to become a seminal feature of the Roman health care system. These political and social trends also account for the discernible gap in the social status of physicians in the Roman West and in the Hellenistic East before 300 CE.[53] The scant epigraphic evidence for physicians in the Roman West during the Republic (although literary reports confirm the existence of physicians who were immigrants, slaves, freedmen, and traveling drug sellers) indicates their lower social status.[54] The long-lasting impact of these social and political trends on the Roman health care system is also demonstrated by the fact that most physicians in the Roman world were of Greek descent.[55]

Roman society was conscious of, and often defensive about, the effect of Greek culture upon it. However, Cato's warnings against the impending dangers of the influence of Greek culture (even if genuine)[56] and lamentations for the decline of traditional Roman medicine, best described by Below as "Mischung von Empirismus und Aberglauben," were in vain.[57] Life in the growing city of Rome did not allow access to the herbs used as remedies in traditional Roman medicine, and it reduced the number of those skilled in making and prescribing them.[58] In consequence, the place of traditional Roman medicine in the High Roman Empire's medical market place was gradually diminishing. In addition, the encounter with what seemed to contemporaries to be a more sophisticated, Hellenic culture made the adoption of Greek medicine—and some of the Greek institutions of social administration of medicine, such as public physicians—hard to resist. In the realm of health care, the Roman encounters with the Greek world encouraged the establishment of medicine as a profession, and although the initial Roman reaction toward the arrival of Greek medicine was suspicion and reluctance, Romans grew receptive and even appreciative. Although practicing medicine was still looked down upon by the members of the Roman aristocracy (and continued to be viewed as something foreign well into late antiquity), the Roman world acknowledged, at least in practice, the superiority of Greek medicine over traditional Roman patterns of healing.[59]

The first century BCE saw an influx of Greek physicians into Rome, mainly in upper-class circles, where the influence of Hellenic culture was most vigorous. Many of the distinguished late Republican households accommodated Greek intellectuals, including some physicians. One of the first of the Greek physician-intellectuals to find a place among the Roman elite was Asclepiades of

Bithynia.[60] Asclepiades was born in the town of Prousias and later visited the Hellespont, Pergamum, and Athens before coming to Rome.[61] Although Asclepiades' date of arrival in Rome is far from settled, he was living, working, and writing there before 90 BCE.[62] None of Asclepiades' works have survived, and modern scholars must, in their attempts to reconstruct his lost doctrines, rely on fragments and comments, which are found in the works of later authors. These fragments confirm that in addition to medicine, Asclepiades also took part in the philosophical discourse of his day, rejecting providentialism and teleology and accounting for bodily function in purely mechanistic and quantitative terms.[63] Both Asclepiades' social standing and his impact upon Roman society are demonstrated by his status as an *amicus* of L. Crassus, an interlocutor in Cicero's *De Oratore,* and he was admired (even if not uncritically) by Antioch of Ascalon, Celsus, Pliny the Elder, Galen, and many others. In the words of Elisabeth Rawson, "It can be argued that there was no intellectual figure at work in Rome in the period of the late Republic who had more originality and influence than the Bithynian doctor Asclepiades."[64]

Polito has suggested that Asclepiades received his medical education in Alexandria at the end of the third century BCE, being the son of the Herophilean physician Andreas. Although there are many conceivable ways by which Greek medical ideas could have made their way to Rome, this hypothesis offers one explanation of how theories and practices originating in Alexandria came there.[65] As Rawson herself has acknowledged, it is unlikely that Asclepiades received his intimate knowledge of Alexandrian medicine in Rome during the second century BCE.[66] Polito has argued further that even in Bithynia, Pergamum, and Athens such a close acquaintance with Alexandrian debate was unlikely during the second century.[67] This hypothesis can also explain the high repute and success Asclepiades enjoyed in Rome. Third-century BCE Alexandria was the most renowned medical center to date. Asclepiades would have brought with him the reputation, knowledge, and expertise associated with Alexandria. These traits would have been of great help in the professional competition with other second-century physicians practicing in Rome. Whether Asclepiades' Alexandrian background is accepted or not, he was a typical product of the Hellenistic era, in which the upper tier of physicians habitually traveled between the great scholarly cities—which were nourished and supported by the Hellenistic monarchs—thus accumulating experience, professional recognition, and fame.[68]

Comments by Sextus Empiricus attest to the good impression that Asclepiades left in Rome. More than two centuries after Asclepiades' death, Sextus Empiricus wrote that he was a renowned physician who was also a philosopher.[69]

Asclepiades must have had a good rhetorical education, and, before becoming a physician, he had observed medical cases at Parium on the Propontis, by the Hellespont, and in Athens.[70] Such rhetorical training was not uncommon among Greek physicians.[71] They often lectured to a general audience on medical issues, and Asclepiades surely delivered such lectures after arriving in Rome.[72] Therefore, not surprisingly, as an interlocutor in Cicero's *De Oratore,* Asclepiades was a representative of epideictic oratory.[73] According to the somewhat hostile testimony of Pliny the Elder, Asclepiades was a contemporary of Pompey and a professor of rhetoric who only turned to the practice of medicine in the hope of making more money as a physician.[74] Pliny reported that Asclepiades introduced some substantial changes to traditional drug-based Roman medicine, and, although Pliny was critical of the (mainly Greek) habit of charging money for medical care, he acknowledged the superiority of the Bithynian physician's techniques over those of his contemporaries.[75] Pliny further commented that Asclepiades' fellow physicians unanimously endowed him with *summa fama*.[76]

Asclepiades' impact was not limited to the province of academic medical discourse, however. His influence was also felt in Romans' therapeutic habits from the first century BCE onward. As an enthusiastic advocate of hydrotherapy, both for the sick and the healthy, Asclepiades left his mark on one of the most popular methods of seeking of health care: bathing.[77] In fact, his extensive use of water therapy won him the nickname the "water giver."[78] According to Celsus, Asclepiades' regimen was both innovative and extremely popular among Romans.[79] Although he was probably not a physician by training, Celsus himself is likely to have had some practical medical experience.[80] Pliny thought that this new therapeutic measure appealed particularly to the baser characteristics of the human nature, but he was forced to acknowledge both its popularity and its usefulness.[81] And although Asclepiades cannot be credited with the popularity of baths and bathing among the Romans, for whom "public baths embodied the ideal Roman way of urban living,"[82] Asclepiades was at least responsible for many of the medicinal explanations given for attending them.

Asclepiades of Bithynia was not the only Greek physician to practice in Rome during the first century BCE. Therefore, the good reputation of medicine, which was associated with him, was not a passing phase in the intellectual life of the late Roman Republic. Artemidorus, another Greek physician, was granted Roman citizenship in 80 BCE by C. Cornelius Dolabella and later joined the circle of Verres.[83] Cicero recommended another Greek physician, Asclapo of Patras, to his friend Sulpicius Rufus.[84] Cicero believed that medicine was a profession worth learning by

those of intelligence and the appropriate social standing, insofar as the benefits it brought were not inconsequential.[85] The clientele of the physician whom Cicero had in mind was predominantly the Roman aristocracy, Cicero's peers. The humble would not have had access to a Greek physician of high reputation.[86] Varro, in fact, thought that farm slaves should be treated by the herdsman rather than by a physician.[87] The rich, however, had private physicians who were part of their entourage. For example, L. Piso took his physician with him to his province, Macedonia,[88] and Atticus's daughter was treated by Craterus, whose skill and expertise were acknowledged by Cicero and by Horace.[89]

The young Julius Caesar had a physician in his entourage at the time he was abducted by pirates near the island of Pharmacussa when traveling to the island of Rhodes to study under Apollonius Molon.[90] The importance Caesar ascribed to having his physician at hand is attested to by the fact that, having sent all his staff away to borrow the ransom money, he still kept with him his physician, along with two valets. At the end of his life, his physician Antistasius noticed that, of the many wounds inflicted upon him on the Ides of March, none were mortal except the one in the chest.[91] Shortly after Caesar's death, during the civil wars, two Roman consuls, Hirtius and Pansa, died in battle against Mark Antony. Cicero and Suetonius both reported that their deaths were rumored to have been caused by the young Octavian, who wanted a preeminent position in the government. "The circumstances of Pansa's death in particular were so mysterious, that the physician Glyco was arrested on the charge of having applied poison to his wound."[92] Toward the end of his life, Augustus sent a letter to his granddaughter Agrippina concerning Gaius, which read, "Yesterday I arranged with Talarius and Asillius to bring your boy Gaius on the fifteenth day before the Kalends of June, if it be the will of the gods. I send with him besides one of my slaves who is a physician, and I have written Germanicus to keep him if he wishes."[93] Each of these physicians had a Greek name.[94] Indeed, all the evidence shows that professional physicians, usually of a Greek descent, were viewed as a necessity in upper-class Rome of the late Republic and early Principate. This demand for Greek medicine and Greek physicians had a lasting and formative effect on the Roman health care system.

Not until the age of Julius Caesar, however, did Roman law address the whole category of physicians. Caesar's legislation encouraged Greek physicians to migrate to Rome by granting them Roman citizenship and tax immunities.[95] Suetonius recorded this measure, but he was not explicit as to Caesar's motives. The context suggests that it was part of Caesar's reconstruction of the city of Rome after the civil wars and his attempts to restore tranquility back into the fabric of Roman life:

> Octoginta autem civium milibus in transmarinas colonias distributis, ut exhaustae quoque urbis frequentia suppeteret, sanxit, ne quis civis maior annis viginti minorve quadraginta, qui sacramento non teneretur, plus triennio continuo Italia abesset, neu qui senatoris filius nisi contubernalis aut comes magistratus peregre proficisceretur; neve ii, qui pecuariam facerent, minus tertia parte puberum ingenuorum inter pastores haberent. Omnisque medicinam Romae professos et liberalium artium doctores,[96] quo libentius et ipsi urbem incolerent et ceteri adpeterent, civitate donavit.[97]
>
> Moreover, to keep up the population of the city, depleted as it was by the assignment of eighty thousand citizens to colonies across the sea, he made a law that no citizen older than twenty or younger than forty, who was not detained by service in the army, should be absent from Italy for more than three successive years; that no senator's son should go abroad except as the companion of a magistrate or on his staff; and that those who made a business of grazing should have among their herdsmen at least one-third who were men of free birth. He conferred citizenship on all who practiced medicine in Rome, and on all teachers of the liberal arts, to make living in the city more desirable to them and others.

Caesar's desire to have more trained physicians with Roman citizenship dwelling in the city was probably motivated by his need for military physicians.[98] Moreover, to attract physicians to the city, as well as liberal arts teachers, Caesar must have had the well-being, tranquil disposition, and political support of Roman plebs in mind.[99] Since the rich had their own physicians, any attempt to keep them content by ensuring the availability of Greek physicians would have been inconsistent with the rest of the dictator's concurrent acts. Luring Greek physicians to Rome with Roman citizenship and financial benefits was therefore more likely aimed at keeping the social order within the city by providing for its plebs.[100] Additionally, the potential threat Caesar identified in allowing *collegia* in Rome, which led him to ban them either by law or merely by a decree, did not include physicians.[101]

In contrast to medieval guilds, whose members banded together on their own initiative for the promotion of their own interests, Roman *collegia* were created by the state for the convenience of the provincial administration in dealing with various professionals. When, for example, the government wanted to place an order for garments or blankets for the military, it needed only to communicate with the secretary of the weavers' guild in the relevant area, instead of locating and communicating with individual weavers. Similarly, the existence of an association allowed the provincial government to hold the group collectively responsible for ex-

ecuting its policy and therefore liable if it was breached.[102] Caesar, like future *principes,* needed to be able to enlist a large number of physicians for military service with considerable speed. The formation of physician associations enabled Roman emperors to locate physicians either for recruitment or for any other end.

Augustus continued Caesar's legislation regarding physicians but under a different pretext, that of a personal reward, which better fitted his public image of a *pater patriae,* whose personal well-being was equivalent to Rome's.[103] At least two ancient references to Augustus's legislation regarding physicians exist, indicating two different pretexts. Suetonius mentioned the grant of citizenship to physicians in the context of a more general expulsion of the *peregrini* from Rome, an edict from which physicians were exempt:

> Magna vero quondam sterilitate ac difficili remedio cum venalicias et lanistarum familias peregrinosque omnes exceptis medicis et praeceptoribus partimque servitiorum urbe expulisset.[104]
>
> Once indeed in a time of great scarcity when it was difficult to find a remedy, he expelled from the city the slaves that were for sale, as well as the schools of gladiators, all foreigners with the exception of physicians and teachers, and a part of the household slaves.

Earlier in Augustus's biography Suetonius discussed the *princeps*'s establishment of the *lex Julia de collegiis,* which was aimed at restoring the public order by prohibiting associations that posed a threat. Although it is unclear to what degree this law was enforced in the Greek East, the fact that Suetonius was both aware of it, and did not think it bore any relevance to physicians, indicates that he thought that Augustus saw physicians as a nondissident body from which the Roman state would benefit if it formed a *collegia.* Suetonius wrote:

> Pleraque pessimi exempli in perniciem publicam aut ex consuetudine licentiaque bellorum civilium duraverant aut per pacem etiam exstiterant. Nam et grassatorum plurimi palam se ferebant succincti ferro, quasi tuendi sui causa, et rapti per agros viatores sine discrimine liberi servique ergastulis possessorum supprimebantur, et plurimae factiones titulo collegi novi ad nullius non facinoris societatem coibant. Igitur grassaturas dispositis per opportuna loca stationibus inhibuit, ergastula recognovit, collegia praeter antiqua et legitima dissolvit.[105]
>
> Many pernicious practices mitigating against public security had survived as a result of the lawless habits of the civil wars, or had even arisen in time of peace.

> Gangs of footpads openly went about with swords by their sides, ostensibly to protect themselves, and travelers in the country, freemen and slaves alike, were seized and kept in confinement in the workhouses of the landowners; numerous leagues, too, were formed for the commission of crimes of every kind, assuming the title of some new guild. Therefore to put a stop to brigandage, he stationed guards of soldiers wherever it seemed advisable, inspected the workhouses, and disbanded all guilds, except such as were of long standing and formed for legitimate purposes.

Suetonius did not explicitly mention physicians as one of the *collegia legitima,* but an inscription from Alexandria dated 7 CE makes any other alternative virtually impossible. The inscription reads:

> Γάιον Προκλήιον Θεμίσωνα ἀρχιατρὸν
> τὸ πλῆθος τῶν ἐν Ἀλεξανδρείαι [.....]-
> μένων ἰατρῶν εὐνοίας χάριν
> [ἔτους] λζ΄ Καίσαρος Φαῶφι [—΄].

> The assembly of physicians who [practice] in Alexandria (honor) Gaius Proculeius Themison, *archiatros,* for his goodwill. [on the year] seventh of Caesar (Augustus) the [. . .] of month Phaophi.

The text was first published by Römer.[106] Her reconstruction of the lacuna at the end of the second line read [συνηγ]μένων, and the translation she offered was "der in Alexandria versammelten Ärzte," which Römer took as an occasional gathering of physicians—who usually reside elsewhere—in the city of Alexandria. Although the term τὸ πλῆθος often denoted a college in Egypt and elsewhere,[107] Römer was reluctant to read this inscription as evidence for the existence of a college or an association of physicians in the city of Alexandria. Her argument is twofold: the term ἀρχιατρός never takes the meaning of a president of an association,[108] and the space on the stone allows no reconstruction except συνηγμένος, which renders a meaning of "practicing" or "established." A later editor, Kayser, allowed τὸ πλῆθος the meaning of an association and reconstructed the lacuna at the end of the second line into [καθη] | μένων, which he translated as "résider, avoir une activité sédentaire."[109]

Marguerite Hirt Raj offered yet another reading: [ἐργαζο]|μένων is a sense of "pratiquer un art, un métier."[110] Evidence shows that the verb ἐργάζομαι was used to denote the practice of physicians and the noun ἐργαστήριον their place of work.[111] She argued that a city as large and as important as Alexandria must have

had an association of physicians.[112] The connection between medical research and practice and the museum in Alexandria, the fact that the members of the museum formed a σύνοδος, and the patronage of Augustus (and future emperors) toward the museum, support this view.[113] Raj's reading presumes the inclusion of physicians among the *collegia legitima* under the *lex Julia de collegiis.* In 7 CE, Alexandria did not allow for a public honorary dedication to a member of a *collegium illicitum.* Alexandria, much like the rest of Egypt, was closely monitored by the *princeps* because of its importance to the stability of his reign. By the time Themison was bestowed with this honor, Egypt lay under the emperor's direct control. Even if the *lex Julia de collegiis* was not enforced throughout the Greek East, such defiance against Roman law could not have occurred in Alexandria.[114]

A second pretext that led Augustus to bestow privileges upon physicians had a much more personal connection with the *princeps* himself. Dio reported that when Augustus was consul for the eleventh time, with Calpurnius Piso, he fell severely ill—not for the first time—and hovered between life and death, with the future of the old Republic and the new Principate hanging by a thread. The transition of power was already in motion when "a certain Antonius Musa restored him to health by means of cold baths and cold potions."[115] This incident, also recorded by Suetonius, resulted in a grant of money being made to the skillful physician and a statue of him being erected next to that of Asclepius.[116] Both Dio and Suetonius explicitly claimed that these privileges were given to Antonius Musa as Augustus's personal physician.[117] Augustus's attitude toward Antonius Musa was typical of a *princeps* who consciously blurred the distinction between his private and public image and identified his well-being with that of the Roman state. Musa was generously rewarded for his services with large sums of money from both the Roman senate and Augustus himself. Hence Musa's services were given to Augustus the person but also to the Roman people as a whole. Musa was also granted an exemption from taxes, "both for himself and for the members of his profession."[118] According to Dio, Musa had also been granted the right to wear a golden ring, which was reserved only for knights, and despite his humble origins.[119] Even more importantly, these privileges were granted to all physicians and not to Antonius Musa alone.

Granting this exemption from taxes and civic liturgies to an entire professional group had potentially far-reaching social effects in the Greco-Roman world. The inclination of Rome to encourage urbanization in the provinces, its preference for local governing bodies made up of local aristocracies (or oligarchies), and the common habit of bestowing benefactions by those who could but were not legally

obliged to do so turned the provincial urban elite into the backbone of imperial Rome's system of government.[120] In the East, Roman organization had taken advantage of a preexisting urban way of life promoted by the Hellenistic kingdoms.[121] The West needed a longer period of acclimatization to Roman rule. However, although East and West differed both in their pace of "Romanization" and in many other significant details, the broad objective was the same: "the need to encourage or create civilized and self-sufficient communities (whether based on *poleis* or *civitas*) governed by their indigenous aristocracies."[122] Public services, distributed according to property qualifications (called "liturgies" in the East and *munera* in the West), were necessary in order to distribute the burden of local administration.[123] Securing a large enough number of civic magnates who could act as local administrators was therefore imperative for the stability of the Roman provincial government. Excluding whole sections of the provincial urban upper classes from the potential providers and governors of these cities would have undermined the Roman provincial administrative system. In reality, Caesar and Augustus had long taken care to separate the bestowal of Roman citizenship from the right to exemption from taxes and civic duties in order to preserve the local wealthy classes and their willingness to manage their cities and provide for them.[124] Notably, when Augustus bestowed Antonius Musa and his colleagues with tax immunity, the presence of a physician in the upper tiers of civic society was a rarity.

The establishment of the Principate, however, marked a new stage in the social history of medicine in the Roman world. Legal sources provide the clearest expression of this change.[125] A review of the relevant documents of the imperial rescript system—which functioned as a social service, as an element in the juridical process, and as an instrument of law and government—allows an insight into the dynamic attitude of society and government toward medicine and physicians during the High Roman Empire and beyond as well as to the social, political, and economic forces that influenced it.[126] Significantly, imperial law-giving was not restricted to civil or criminal law. Rather, a considerable part of the legislation concerned matters of social and communal life in the provinces. As a result, the legal sources, and particularly the *Digest,* are documents of social history, primarily for the second and third centuries CE.[127] A critical review of the juridical sources concerning physicians' legal status during the High Roman Empire shows, first, that the shift in their status from frowned-upon foreigners into highly reputed professionals was slow but steady,[128] second, that physicians should not be taken en bloc, and, third, that Roman legislators incorporated various considerations when formulating legal decrees concerning physicians' status.

As Fergus Millar has pointed out, the *ateleia* of Musa and his fellow practitioners "in present and future" is highly ambiguous.[129] In fact, only in the Flavian era did the precise nature of these imperial immunities to physicians become explicit. A Pergamene inscription records an edict of Vespasian on the privileges of physicians, grammarians, and sophists: κελεύω μήτε ἐπισταθμεύεσθαι [αὐτοὺς μήτε εἰ]φορὰς ἀπαιτεῖσθαι ἐν μηδενὶ τρόπωι (I order that they will be not liable to have persons quartering with them or that they will be imposed with property tax in any fashion).[130] This constitution also recognized that the Asclepiadae formed a *collegium licitum:* ἐ/[——Ἀσκληπιάδ]αις ἡ τῶν σωμάτων ἐ/πιμέλεια (if the [charge] of our bodies has been [assigned to the Asclepiadae] alone).[131] This inscription agrees with *Dig.* 50.4.18.30, except in the inclusion of philosophers among those upon whom Vespasian bestowed privileges.[132] Apparently, Vespasian was the first to grant immunity to the whole class of teachers.

An Ephesian inscription, dated back to the reign of Trajan, is equally revealing. It concerned certain financial privileges that the Roman government granted physicians, sophists, and grammarians. The inscription, fragments of which were originally grouped together and published by Keil,[133] was later published by Knibbe after two additional fragments were found nearby in 1980.[134] Knibbe suggested that the two additional fragments composed a second inscription, which was displayed next to the first one.[135] The inscription reiterated an earlier *senatus consultum,* or an edict of the triumvirs, from the years 42 to 39 BCE, which bequeathed certain financial privileges to sophists, grammarians, and physicians.[136] The inscription itself dates back to the reign of Trajan.[137]

The announcement of such a decree in Ephesus, and the association of physicians with sophists and grammarians, proves that at least some physicians were residents of Ephesus and belonged to its upper class. Furthermore, unlike the general proclamation of Augustus mentioned above, the publication of such decrees in Pergamum and Ephesus, the legal language in which they were formulated, and the general modus operandi of the Roman imperial government to issue *rescripta* whenever a Roman governor required imperial clarifications on how to rule suggest that by the Flavian era at least some physicians were members of the civic elite and were deemed eligible for immunity from liturgies for the services they granted to their cities. These privileges were given by the cities themselves under the guidance of the Roman government.

In the Flavian era, the Greek world witnessed a further acceleration of economic and cultural progress, which began with the establishment of the Principate. During this period, the Greek cities enjoyed a growing degree of self-administration.

This age of affluence encouraged an increase in benefactions from civic magnates to their cities. In addition, the cultural characteristics of the civic elite accounted for the inclusion of the most learned physicians among the upper class; it was keen to account for its political might using terms borrowed from an era of Greek political freedom and a cultural golden age.[138] Medicine had long been part of this Greek *paideia*. In addition, the affection of the Roman imperial government toward the Greek world encouraged this renaissance. Taken together, by the Flavian era—and throughout most of the second century CE—the political, economic, and cultural situation of the Greek world differed extensively from that of the second triumvirate, when the first *senatus consultum* concerning immunities for physicians was issued.[139]

Evidence shows that this shift in the social standing of physicians and the resultant reaction of the imperial and civic institutions occurred from the Flavian era onward throughout the Greco-Roman world. An early second-century CE inscription from Ephesus named two physicians who were exempt from their civic duties.[140] Their high social standing is evident from their title of "council member" (βουλευτής). Another Ephesian inscription of the same period associated some physicians with the city's museum (τῶν ἀπὸ τοῦ Μ]ουσείου ἰατρῶν).[141] As *rescripta,* the decrees displayed in Pergamum and Ephesus must have originated from a practical need. *Rescripta* were written answers to questions or petitions submitted by individuals, officials, or public bodies concerning all aspects of Roman law. These legal queries were dispatched to the emperor, who then replied to them using his legal aids.[142] Such replies became increasingly common from the reign of Hadrian onward, and a great number of them are preserved in the *Codex* of Justinian.[143] Particularly relevant here is that such a reply could then be cited as precedent and had the power of law.[144] The local Roman magistrates who presided over legal procedures required an imperial ruling on a matter that was previously not discussed in the courts. The appearance of these imperial decrees shows how immunities for physicians had become a reality. Social and economic changes, which had already occurred, provided the impetus for the imperial government to set this decree in stone. The various honorary inscriptions to physicians who enjoyed these immunities, and other forms of honors throughout the Greco-Roman world from that time onward, demonstrate the widespread nature of this phenomenon.

The effects of the social and economic reality on the place of physicians in society and on the attitude of the governing institutions toward them is further demonstrated by an edict of Antoninus Pius that overturned the general grant of immunity from liturgies for physicians (alongside grammarians and sophists). This

removal probably occurred because it lay too large a burden on other sectors that were able to carry the liturgical duties within the cities.[145] Modestinus wrote that grammarians, teachers of rhetoric, and doctors known as "general practitioners" were exempt from tutelage and curatorship. He explained that, according to the edict of Pius, each city contained a fixed number who were exempt from public duties, the selection of which was limited by law. Modestinus supplied this piece of legislation by quoting a letter of Antoninus Pius, which was written to the province of Asia but of universal application, the main provision of which is as follows: "Lesser cities can have five doctors immune from public duties, three teachers, and the same number of grammarians. Larger cities seven medical men and four of both types of teacher. The largest cities ten doctors and five rhetoricians and a similar number of grammarians. Beyond this number even the greatest city is not granted immunity." This exemption from public duties could only be enjoyed by someone included in the number exempt by a decree of the city council, and so long as he was diligent in his work.[146]

Pius's edict demonstrates how bestowing privileges on physicians had changed from being of no practical implication during the period of the second triumvirate and Augustus to actually debilitating the civic aristocracies' ability to man local governing posts by the first half of the second century CE because a critical mass of its members were exempted by this policy. Furthermore, the sanctioning of the civic councils to grant these concessions proves both that privileges for physicians were habitually granted and that they had an impact on the fabric of civic life. It also indicates the widespread habit among the cities' inhabitants of turning to physicians. The continuous amendments and *rescripta* concerning immunities that are found in the legal sources throughout the period of the High Roman Empire resulted from the Roman government's efforts to secure the position of the Greek aristocracies within the cities by honoring them, while at the same time ensuring that these honors did not hinder their capacity to govern. The practical meaning of this policy was that the nature of such immunities was both shaped by and reflected the social and economic reality. For example, Pius's decree had to be amended during the reign of Marcus Aurelius and his brother, Lucius Verus, no doubt because of pressure from below. Modestinus wrote in the eleventh book of his *Encyclopedia* that whenever there was a shortage of men who took office, immunity could in some respect be breached.[147]

Within a century, from the publication of the first decrees in Pergamum and Ephesus until the reign of Marcus and Lucius, immunity for physicians first turned into reality and then had to be maintained. That Commodus felt obliged to

reiterate the edict suggests that in the cities some tried to change this ruling.[148] Pius also introduced a clause by which the *decuriones* or *possessores* of the city itself decided which physicians should enjoy these privileges, rather than having them imposed from above by the governor.[149] According to Ulpian, only two conditions had to be met: *probitas morum* (uprightness of morals) and *peritia artis* (knowledge of the art).[150] In addition, the cities had a mechanism for controlling and regulating physician appointments in the form of the *curator reipublicae.* Ulpian, in his treatise on the duties of a *curator reipublicae,* allowed for these salaries to be given by a decree of the town council if they were for a liberal art or for a physician.[151] The actual meaning of this legislation was that the city was in charge of selecting its physicians and Roman legislators appreciated that different cities had different needs.

The history of the medical profession under Roman rule demonstrates that this Greek form of health care—both in method as well as in its social organization—turned from a frowned-upon novelty into a central component of the Roman medical market place. This was true ever since the initial introduction of a professional medic before the outbreak of the Second Punic War through the last two centuries of the Roman Republic and under the *principes.* The preference for this form of health care was initially expressed by privileged individuals during the Republic and then through the legislation of the Roman emperors during the Principate. The legal evidence shows that the Roman state, from the time of Julius Caesar's dictatorship onward, regarded the administration of medical services to be closely interlinked with other aspects of civic administration. A comparison of the actual measures taken with the evidence from the Greek world of the classical and Hellenistic eras clearly suggests that the Roman state consciously adopted not only Greek medicine and its agents but also some of its modes of organization and administration.

The Nature of the Medical Market Place during the High Roman Empire

In addition to the Greek influence and the urbanization already discussed, the circumstances predominantly responsible for shaping the Roman attitude toward the medical profession were the changes associated with the institution of the Principate. The establishment of a large professional army, with its legions permanently stationed at the Empire's outskirts, called for the creation of a Roman medical corps and required a large number of skillful physicians with Roman citizenship.[152] Other trends shaping the profession of medicine concerned the attitude of the Roman em-

perors toward the Greek world, the administration of the provinces, and the government of the Empire.

The foundation of the Principate inspired a new golden age within the Greek world. Greek cities prospered, and with them Greek culture. This cultural phenomenon, which modern scholars have often called the Second Sophistic, was characterized by the Greek civic upper class's use of their *paideia* as justification for their political power.[153] The Roman emperors' support in this Greek cultural renaissance helped the educated elite—the *pepaideumenoi*—to muster power. They were bestowed with honors and privileges by the Roman government, which secured their position within the cities. The popularity of Greek culture within imperial circles helped the *pepaideumenoi* to become important benefactors for their cities and provinces by recruiting the emperors' support.

From the outset, some physicians' status within the imperial circle was similar to that of other intellectuals, orators, and jurists.[154] Stertinius Xenophon of Cos, for example, was chief doctor (*archiatros*) of the divine emperors (ἀρχίατρον τῶν θεῶν Σεβαστῶν), and in charge of issuing *apokrimata* in Greek (ἐπὶ τῶν Ἑλληνικῶν ἀποκριμάτων). Moreover, Stertinius Xenophon also held the post of tribune, and at one time acted as a *praefectus fabrum* and a benefactor of his native Cos (εὐεργέτην τῆς πατρί | [δ]ος). In addition, he was a lifelong high priest of the emperor as well as high priest of the gods and of Asclepius, Hygieia, and Epione (ἀρχιερέα τῶν θεῶν, καὶ ἱερέα δι[ὰ] | [βί]ου τῶν Σεβαστῶν, καὶ Ἀσκλαπιοῦ, | [καὶ] Ὑγίας, καὶ Ἠπιόνης).[155] The imperial physician Ti. Claudius Menecrates was "honored by famous cities" in recognition of his immense published work on his own system of medicine.[156] Another imperial physician, this time of Trajan, was T. Statilius Criton. He was one of the emperor's *amici,* a procurator and a historian of the Dacian Wars. Criton was honored by a society of physicians in Ephesus.[157]

The attitude of the Roman government toward physicians, however, must not be taken as evidence that either medicine or its agents had a monopoly over health care. Even within the medical profession existed enormous differentiation among the various practitioners. In fact, they continued to operate within a "medical market place" in which *authority* was in the hands of the health care providers but *power* remained in the hands of the sick, insofar as they chose which of the available treatment options to follow. The first-century CE Roman Empiricist physician Scribonius Largus and the Severan jurist Ulpian held similar attitudes toward physicians, their abilities and shortcomings. Both held that other reliable forms of healing methods existed and that reliable healers existed in the field of health care who were not trained physicians. The picture emerging from their works is one of an

open medical market place made up of a variety of religious, magical, empirical, and medical practitioners. Scribonius Largus was a physician and a pharmacologist living and working in Rome.[158] Unlike some of the Latin authors who wrote about medical matters, Largus himself was a practicing physician. He cured some individuals of earache,[159] others, whom Largus described as *non ignotos,* of colic,[160] and a slave of a perfume seller who was vomiting excrement.[161] He accompanied Claudius on the British campaign of 43 CE,[162] probably at the instigation of Caius Julius Callistus, an influential freedman who was the secretary in charge of petitions.[163] Largus must have been an experienced practitioner with a wide range of medical expertise and a diverse clientele, which varied from a slave to an emperor. He dedicated his *Compositiones,* alongside his other Latin medical writings, to the emperor. The *Compositiones,* which is the only work of Largus to survive, is a collection of drug compounds or recipes, written, as is related in the *Preface,* when he was abroad with only a few books at his disposal.

Nothing is known of Largus beyond what can be inferred from the *Compositiones.* He may have been born in Sicily at the beginning of the first century. He apparently wrote in both Greek and Latin, given that he referred to his work in Latin being presented to the emperor and that Galen, a century and a half later, quoted prescriptions in Greek that do not appear in the surviving Latin text.[164] Although Largus treated members of the imperial household, he was probably not Claudius's personal physician. That role belonged to Xenophon, who also had gone on the British expedition and later, as Tacitus relates in the *Annals* (XII), was induced by Agrippina (Claudius's fourth wife) to murder the emperor by means of a poisoned feather.

At the heart of Largus's understanding of the medical profession lay the question of medical ethics, which, as far as Largus was concerned, was interlinked with the question of who was a physician.[165] The measure for belonging to the medical profession Largus posed was not one of knowledge but one of ethics.[166] His ethical basis was twofold: mercy and humanity.[167] Although the philosophical foundation of Largus's understanding of ethics is still debated among scholars, his reference to the *Hippocratic Oath* suggests a Greek framework with the "credo scientia enim sanandi, non nocendi est medicina" (I believe that medicine is the knowledge of healing, not hurting).[168] The moral command to treat everyone to the best of the physician's ability is attributed by Largus to Hippocrates, whom he described as the founder of the medical profession.[169]

Most, if not all, of the prescriptions in the *Compositiones* seem to have been gathered from teachers and connections at the imperial court, including an antidote

against poison favored by Augustus; a drug against colic prepared for Tiberius; an ointment used by Claudius's mother (Antonia) and grandmother (Livia); and dentifrices used by Augustus's sister (Octavia), Livia, and Messalina, Claudius's third wife. This mention of Messalina (LX), in fact, allows the book to be dated sometime after Callistus succeeded to his post in late 47 CE and before the execution of Messalina for adultery later the following year. In total, it describes 271 compounds (arranged from head to toe, according to the site of the disease), antidotes (against poisons, bites, and stings), plasters, dressings, and salves. It also references aconite (CLXXXVIII) and an early form of electro-analgesia, in which the shock of the torpedo ray was used to manage both headache (XI) and gout (CLXII)—the latter when a freedman of Tiberius standing on the seashore allowed the repeated shocks of a ray placed beneath his feet to numb the pain.

Largus was also aware of the existence of healing techniques and practices that lay outside the realm of medicine (*extra medicinae professionem cadunt*) and was reluctant to discredit their efficacy.[170] He included, for example, remedies against epilepsy (XVII) that involved drinking the blood of a gladiator or consuming a portion of the liver, which were explicitly described as falling outside the *professio* of medicine. Such cures for epilepsy were not uncommon.[171] Celsus claimed that some had freed themselves from such a disease by drinking the hot blood from the cut throat of a gladiator, and, although Celsus describes this method of treatment as a "miserable aid made tolerable by a malady still more miserable," the efficacy of the treatment is not criticized, nor are doubts cast to it actually being used.[172] Celsus himself followed the Hippocratic tradition of *Morb. Sacr.* in his understanding of epilepsy, as can be seen in his pronouncement that epileptic fits are easily treated if they appear before puberty.[173] Pliny was familiar with a similar prescription.[174] Even Galen told of people who drank tonics made from burned human bones in the attempt to secure a cure for both epilepsy and arthritis.[175] Thus, the testimony of Largus shows that the boundaries of medicine did not include all forms of efficacious treatment. Moreover, at least in the case of epilepsy, no clear criterion distinguishes between the nature of treatment offered by physicians and that which lay outside the realm of medicine.[176]

Ulpian, a jurist and legislator who was writing in the first few decades of the third century CE, offered a legal definition of "physician."[177] Such a definition was needed because Roman law endowed physicians with certain privileges; therefore, those eligible had to be identified. While offering legal criteria for recognizing physicians, Ulpian acknowledged the existence of other types of healers, whose efficacy, he noted, was well attested. Although Roman law clearly distinguished

between physicians and other groups of healers, such as chanters, exorcists, and practitioners of divination, the famous Severan jurist was cautious not to discredit the usefulness of their methods:

> Medicos fortassis quis accipiet etiam eos, qui alicuius partis corporis vel certi doloris sanitatem pollicentur: ut puta si auricularius, si fistulae vel dentium. Non tamen si incantavit, si inprecatus est, si, ut vulgari verbo impostorum utar, si exorcizavit: non sunt ista medicinae genera, tametsi sint, qui hos sibi profuisse cum praedicatione adfirment.[178]
>
> Furthermore, someone will perhaps accept as medics those who offer health of a certain part of the body or certain pain: as, for instance, an ear doctor, a fistula specialist or a teeth doctor. Not however, if he chanted a magic formula, or if he invoked [a deity], whether, if I should use the expression of common imposters, if he drove away evil spirits: they are not of such a class as medicine, notwithstanding there might be some people, who affirm by proclamation that they [i.e., the chanters, exorcists, etc.] were beneficial to them.

Largus and Ulpian both gave voice to a widespread popular tendency among physicians and patients alike that affirmed the role of religious healing. Roman authors writing during the High Roman Empire, like Celsus and Pliny the Elder, acknowledged—in addition to the Greek origin of the current prevailing system of medicine under Roman jurisdiction—that medicine was of a divine nature, and that a place existed for religious healers, temple medicine, and therapeutics based on revelation.[179] According to Celsus, Asclepius refined this art and, as a result, gained a place among the gods.[180] Pliny merely said, "To its pioneers medicine assigned a place among the gods and a home in heaven, and even today medical aid is in many ways sought from the oracle."[181]

The fact that physicians did not hold a monopoly over health care in classical antiquity, the wide appeal of temple medicine (such as the cults of Asclepius, Serapis, Apollo, and some other, local deities), and the absence of a system of licensing medical practice meant that a broad spectrum of figures were included within the category of healers. For example, a scholar such as Galen or the prolific first-century CE physician Rufus of Ephesus hardly has anything in common with the image of the physician that emerges from the papyri, like Psasnis or M. Valerius Gemellus.[182] Moreover, all physicians had to compete with other types of healers for potential patients.[183] Those in need of health care, even among the wealthiest and noblest, did not always choose a physician. Octavian, for example, after de-

feating Mark Antony and Cleopatra, wanted to keep the Egyptian queen alive in order to present her in his triumph. She tried to commit suicide by snakebite, so he brought her Psylli, of an African tribe who were considered to be experts in treating snakebites.[184] Although not reluctant to use the services of physicians in general, Octavian clearly did not see an immediate advantage in turning to a physician for treating Cleopatra's snakebite.

The Case of Psasnis

In order to examine how a physician came to enjoy this privileged position, let us consider the case of Psasnis, the only example of a Roman court validating the right of physicians to immunities. P. *Oxy.* I.40 is a report of a legal judgment (ἀντίγραφον) given by the Roman governor of Egypt, Valerius Eudaemon, in the case of a claim from Psasnis, for his now lost immunity from public services. Psasnis's ground for this claim was that he was a practicing physician.[185] The language Psasnis used recalls contemporary inscriptions.[186] According to Psasnis, he was a physician and he had treated the very men who selected him for a public post: ἰατρὸς ὑπάρχων τὴ[ν τέ]χνην τούτους αὐτοὺς οἵτινές με εἰς λειτο[υ]ρ[γ]ίαν / δεδώκασι ἐθεράπευσα (I am a physician by skill and I cured these very men who assigned me to liturgy). Eudaemon, although casting doubt upon the quality of this treatment (Εὐδαίμων εἶπεν· τά / χα κακῶς αὐτοὺς ἐθεράπευσας),[187] is sympathetic to Psasnis's case. "If you are a public physician" (εἰ ἰατρὸς εἶ δημοσ[ιεύ]ων),[188] Eudaemon tells Psasnis, "you shall have immunity."

This is not the only instance when Valerius Eudaemon, as prefect of Egypt, presided over legal procedures regarding an allegedly unlawful appointment of a man to perform a liturgy. P. *Wisc.* 23 recorded Eudaemon's accusations against Callinicus, a former village scribe, for nominating an indigent man (an *aporos*) for liturgy. Eudaemon himself must have been an erudite governor with experience and skill in matters of law,[189] but little is known of his career. Two honorary inscriptions, one from Ephesus and another from Syria, give his *cursus honorum*.[190] The papyri also provide further information. William Westermann, who collected the evidence from the papyri, found him to be a governor of some distinction, who was in all likelihood the same Eudaemon cited favorably by Marcus Aurelius in his *To Himself*.[191]

The relevance of the case of Psasnis to a general study of the attitude toward physicians under Roman rule is part of a larger question concerning the validity of conclusions based on the evidence of the papyri for the history of the Roman world at large, and not merely that of Egypt under Roman rule. Significantly, Egypt had

long been acquainted with a relatively high level of state guidance in the administration of its health care. Evidence shows that the centralized organization of Pharaonic physicians survived, at least in part, through to the Hellenistic era.[192] An early Hellenistic "royal physician" by the name of Tatas appears to have been a district official, much like the "royal scribe."[193] The Greek settlers to whom Alexander and his successors assigned the land paid a special medical tax, perhaps to pay for the likes of Tatas. In the middle of the second century BCE, one Chrysermus is recorded as ἐπὶ τῶν ἰατρῶν at Alexandria.[194] In the absence of evidence that Chrysermus was himself a physician, it is safer to assume, like Kudlien, that he was an official administrator in charge of the physicians.[195] If, indeed, Chrysermus was in charge of the physicians, his appointment can be seen as a Ptolemaic adaptation of the Pharaonic institutions of "chief doctor" and "chief of the doctors of Upper and Lower Egypt."[196] However, the Ptolemaics' approach toward health care and its administration did not rest solely on Pharaonic institutions, as can be seen from the use of the title *archiatros*.[197] An example of the administrative role of the Greek institution of the ἀρχιαρτός is the demand of the *archiatros* Athenagoras to the mummy dressers and priests of Fayum that they release the body of an assistant whom he did not want to be mummified.[198] This demand required that the person making it occupies a superior position within an administrative system rather than on professional expertise.

These institutions, which form the context for Psasnis's case, survived the decline of the Ptolemaic monarchy and the establishment of Roman rule in Egypt. Instead of the "royal physicians," however, we now find "public physicians" (*demosioi iatroi*).[199] In addition, although the physician in classical Greece was transient and needed certain incentives in order to settle in a particular city, the Roman physician was an a priori citizen of the city, often a descendant of a family of physicians.[200] The Roman position is attested to in comments made by Galen.[201] Galen's observations, which were often polemic, are corroborated by epigraphic evidence such as that of Aur. Lucianus, who was a member of a family of *archiatri* and was honored by the council and people of Philadelphia in Lydia.[202] Similar references to honors bestowed upon physicians who originated from families of *archiatri* are found in Ephesus, Heraclea, and Thyatira.[203] Evidence from Egypt from the third century CE onward demonstrates that these public physicians were based in the metropolis, and, as part of their duties, they had to send reports of postmortem examinations as well as reports of injuries needed as evidence in court.[204]

On the evidence of papyri, the habit of assigning an expert witness who bore a similar title to that of Psasnis (*demosioi iatroi*) on behalf of the Roman court was

commonplace even prior to the Roman (re-)introduction of the public physicians—at least in Egypt.[205] Physicians were habitually dispatched by the authorities as expert witnesses in cases where their knowledge and experience were useful. In all such cases, the experts were expected to compile a report and send it to the authorities. Such a report was transmitted by Theon, the physician of the city of Oxyrhynchus (Πείσιδι στρα(τηγῷ) παρὰ Θέωνος τοῦ Ἁρπαήσιος ἰατροῦ τῶν ἀπ' Ὀξυρύγχων πόλεως), who was accompanied by an ὑπηρέτης during his inquisitive task, to the *strategus*.[206] The report, dated April 96 CE, is a deposition concerning a head injury inflicted upon a slave, and it was made for a legal procedure. A report of a similar nature was compiled and sent to the *strategus* by Menekios Valerianos, a city clinic owner (ἔχων ἰατρεῖον ἐν κώμῃ) who was accompanied by two of the city elders and by two friends of the victim.[207] Although on the evidence of *BGU.* II. 647, the term "public physician" was not in use in 130 CE and the physician is merely described as having a surgery in the village, this papyrus should be seen as an antecedent to the function of the public physicians as forensic experts in Egypt.[208] Another such report was made in Oxyrhynchus circa 135 CE by an unnamed physician accompanied by an ὑπηρέτης (the assistant of the *strategus*) and forwarded to the *strategus*.[209] In 147 CE in Arsinoite, a widow of a Roman citizen by the name of Petronilla, wanted to establish her baby's right to be the heir of her recently deceased husband.[210] The relevant clause of the Roman praetor's edict "concerning the belly that has to be inspected and a birth that must be watched over" ruled,

> In cases where a widow says she is pregnant, she must take care that the fact [of the pregnancy] is announced to those to whom these matters will be of concern, or to their agent, twice in a month, so that they may send, if they want, women who will inspect the belly. The women to be sent, moreover, are to be free, up to five in number, and these are to do their inspecting all at the same time, lest one of them, while she is inspecting, touch the belly when the woman herself is unwilling. She must give birth in the house of a totally honest woman whom I shall appoint.[211]

This modus operandi aimed to protect the interests of both the child and the family of the deceased father.[212] Often, as in this case, the family of the father challenged the child's legitimacy.[213] Legal procedures commenced under the direction of the *strategus* and taken by the *iuridicus,* who both relied on the testimony of a midwife (μαῖα).[214]

Toward the last decade of Marcus's reign, the physicians whose professional opinions were needed in the Egyptian courts became known by the title of "public

physicians." P. *Oxy.* 2563 was the last papyrus to mention a mere physician undertaking this task. It is a command for a physician accompanied by an ὑπηρέτης to conduct an inquiry and send a report to the *strategus,* dated circa 170 CE.[215] Already by 173 CE, a public physician was needed to undertake the role of an expert witness.[216] Five years later, another public physician from Oxyrhynchus fulfilled a similar task.[217] P. *Oxy.* 475 is a letter from the *strategus* Hierax to one of his assistants, which enclosed a copy of the report sent to him by a certain Leonides regarding the death of a slave from November 6, 182 CE.

> Ἱέραξ στρατηγὸς Ὀξυρυγχείτου Κλαυ-
> ,δίῳ Σερήνῳ ὑπηρέτῃ. τῶν δοθέν-
> των μοι βιβλιδί[ω]ν ὑ[π]ὸ Λεωνίδου
> το[ῦ] κ(αὶ) Σερήνου τὸ ἴσον ἐπιστέλλεταί σοι,
>
> ὅπως παραλαβὼν δημόσιον ἰατρὸν
> ἐπ[ι]θεωρήσῃς τὸ δηλούμενον νε-
> κρὸν σῶμα καὶ παραδοὺς εἰς κηδεί-
> αν ἐνγράφῳς ἀποφάσεις προσφω-
> νήσητε
>
> Hierax, *strategus* of the Oxyrhynchite nome, to Claudius Serenus, assistant. A copy of the application that has been presented to me by Leonides also called Serenus is herewith sent to you. Take a public physician and view the dead body referred to, and having delivered it over for burial make a report in writing.

The slave died falling from a window while watching an entertainment given by dancing girls. Similar evidence shows that public physicians habitually completed this task until at least the fifth century.[218]

This, then, is the legal context in which the case of Psasnis belongs. Even without editorial reconstruction, it is clear that Eudaemon clearly recognized that Psasnis had firm grounds for his case. The Roman prefect never questioned the general right of a physician to enjoy certain privileges by force of the Roman law, and he was willing to endorse this prerogative of Psasnis, "if indeed he is one [i.e., a physician]" (δίδαξον . . . εἰ ἰατρὸς εἶ̃ . . . ἔξεις τὴν ἀλειτουργησίαν). Unfortunately, the exact question Eudaemon asked Psasnis to learn whether he was a physician has been lost to papyrus damage. Grenfell and Hunt suggested δίδαξον τ[ὸ κατα/]τῆκον . . . ἐπὶ ταρι[χείᾳ as their reconstruction. Eudaemon, they assumed, asked about the solvent used in mummification as a test for Psasnis's medical ex-

pertise. This reading raises certain questions, however. First, although embalming was associated with medicine in Egypt[219] and was considered a branch of medicine, no evidence exists to suggest that embalmers enjoyed the same privileges as physicians,[220] meaning that Eudaemon could not have asked if Psasnis practiced mummification in order to know whether or not he was entitled to immunity.[221] The question—or so it seemed to some of the early editors of this papyrus—must have been a clever attempt to learn more about the skills, expertise, and public duties of the petitioner.[222]

Some contextual notes are, therefore, needed. Psasnis was not the only person to petition the Roman prefect in Egypt during Pius's reign for an exemption from liturgies on the grounds that he was a physician. Two years before Psasnis appealed to Eudaemon's court, one M. Valerius Gemellus petitioned Gaius Avidius Heliodorus, then prefect of Egypt, on similar grounds. The result of his petition is unknown. He had been impressed as superintendent of sequestered properties in the villages of Bacchias and Hephaistias. "In the past four years," Gemellus claimed, "this task impoverished him." He also claimed the immunity that was entitled by law to physicians, "particularly to those approved by the municipal curia [δεδοκιμασμένοι] as such like myself."[223] Gemellus requested that he be relieved from a duty imposed upon him to act as a superintendent to certain estates confiscated by the Roman government:

. . . . . ἀξιῶ σαὶ τὸν σω[τῆρα
ἐλεῆσαί με καὶ κελεῦσαι ἤ[δη με
ἀπολυθῆναι τῆς χρείας ὅπ[ως δυ-
·ηθῶ ἐμαυτὸν ἀνακτήσα[σθαι ἀ-
πὸ τῶν καμάτων οὐδενδ[. . . . .
τον καὶ ὁμοιωμ[. . .] ὑποτάξα[ι ὅπως
τέλεον ἀπολύονται τῶν [λειτουρ-
γιων οἱ ἰατρικοὴν ἐπιστή[μην
μεταχειριζόμενοι μάλ[ι]στα [δὲ οἱ δε-
δοκιμασμένοι ὥσπερ κἀγ[ώ, ἵν"
ὦ εὐεργετημενος.

I entreat you, my preserver, to have pity on me, and order me to be released from my duties so that I may be able to recover from the effects of my labors . . . and . . . to add instructions that complete exemption from compulsory services be granted to persons in possession of medical knowledge, particularly to those approved by the municipal curia as such like myself.

The term δεδοκιμάσμενος should be translated here as "approved" or "sanctioned" by the municipal curia rather than as "passed an exam," as Grenfell, Hunt, and Hogarth offered in P. *Fay.* 106.[224] When this petition was created, no physician-licensing system existed in the Roman world. Furthermore, the vast majority of practicing physicians were trained as apprentices to a senior physician rather than in a medical school.[225] Both suggest that taking an exam was never a common practice and therefore could not have been used as an argument in a legal case by a practicing physician claiming his immunity. In fact, the Latin term *probatio,* or its equivalent Greek δοκιμασία, was part of every candidacy for a post of public physician or any other liberal art position and, as such, was accompanied by no particular privileges. It was a condition sine qua non for obtaining exemption from public duties, but the two were not synonyms.[226]

In consequence, the term δεδοκιμάσμενος should be read here as having a social meaning, that is, to be sanctioned by the physician's cohabitants. Candidates for admission to the exemption privilege underwent official scrutiny (δοκιμασία in Greek, *probatio* in Latin).[227] Δοκιμασία referred to the technical term for verification of a claim to civic status or political or military office, but this process included no examination of the candidate's qualifications.[228] In addition, a rescript of Antoninus Pius explicitly states that a doctor can be rejected by the community even if he had originally been approved.[229] Furthermore, the decision over the doctors to be included within the prescribed number of those enjoying immunity was entrusted not to the governor but to the *ordo* and to the landowners of each community, who, being certain as to the skill and right conduct of the physicians at hand, were able to "choose men to whom they may entrust themselves and their children."[230] However, although the selection process was conducted by laypeople rather than professionals (thereby preventing professional authorities from taking part in the deliberations that led to the selection), a comparison with other selection procedures to public posts—such as for the chairs of philosophy and rhetoric—is misleading, all the more so when the relevant city was small.[231] Besides the fact that criteria for a good philosopher were not as self-evident as those of a physician, the requirement of reliable and accessible medical services that led a city to exempt a certain physician from liturgies must have been closer to a practical examination than the legal sources alone can suggest. In the case of Psasnis, Eudaemon was only concerned with Psasnis's practical skills, not with his past studies or familiarity with the three prevailing schools of medicine, something that Galen, by contrast, required of all prospective physicians.[232] In the absence of a licensing system, and with the medical profession relying mainly on

apprenticeship as a training mechanism for beginners in the field, the Roman court had no reason to demand an official document verifying a petitioner's qualifications as a physician.[233] Galen's suggestion that an individual in want of medical assistance should test the potential physician's proficiency reveals more about Galen himself—namely, that he was a physician who was also an intellectual and a *pepaideumenos*—than of physicians more generally.

Another reason to cast doubt on the reconstruction of Grenfell and Hunt is that their reading leaves the case unresolved. If Eudaemon were to examine Psasnis's practical skills as an embalmer to establish whether or not he merited immunity from liturgies, the result of this examination had to be part of the ἀντίγραφον (copy) of his legal decision. Pius's edict that the designation of the permitted ἀτελεῖς (those freed from tribute) in a city be made by the local authorities was already in place by the time Psasnis presented his case in Eudaemon's court.[234] The document that the court issued was meant to be carried back with Psasnis to his native town for the matter to be resolved. It was intended to give the local authorities all the legal information needed to make a considered judgment. The reading of Grenfell and Hunt leaves Psasnis with a transcript of a legal decision with no clear implications. These considerations, alongside more technical deliberations, led Herbert Youtie to offer a reading that changes the kappa for a gamma at the beginning of line 9, and to argue that "Grenfell and Hunt's reading and reconstruction—δῖδαξον τ[ὸ κατα]τῆκον—must be disregarded, and the only possible substitute at this point in the text is δίδαξον τ[ὸν στρα]τηγόν.[235] Instead, he offered the following reading to lines 8–10:

> δῖδαξον τ[ὸν στρα-]
> τηγόν, εἰ ἰατρὸς εἶ δημοσ[ιε]ύων ἐπιτη[δειως],
> καὶ ἕξεις τὴν ἀλειτουργησιαν.
>
> Instruct the *strategus* if you are well-deservedly a public physician, and you shall have the immunity.

According to Youtie's reading, Eudaemon resolved the matter in a clear manner: He sent Psasnis back to his native town, where the στρατηγός had to acknowledge whether Psasnis truly was a public physician (ἰατρὸς δημοσιεύων).[236] If Psasnis was ἰατρὸς δημοσιεύων, he would be granted immunity.

This reading is consistent with Pius's edict, which delegated to individual cities the authority to grant immunities to their physicians.[237] It is also consistent with Galen's observation that in small towns the physician's skill, or lack of it, could not

escape his fellow citizens.[238] Galen's meaning here is that society itself marked out those who were its most suitable physicians by using its collective experience. Galen noted with sadness that his present-day Rome was too big to allow for such a system of social regulation. In turn, this must be taken as evidence that in smaller cities and towns, society itself formed a useful informal quality-control mechanism.[239] Further support for this reading is that Gemellus (P. *Fay.* 106) supported his claim for immunity from liturgies under similar circumstances by arguing that he was one of those who was approved (δεδοκιμασμένοι) to hold the knowledge of medicine (ἰατρικὴν ἐπιστήμην). By this, Gemellus could only have meant that his skills as a physician were well attested. In other words, he actually had patients who could vouch for him. The similarities between P. *Oxy.* I.40 and P. *Fay.* 106 provide further support for Youtie's reading of the ninth line of this papyrus as δημοσ[ιε]ύων, rather than δημόσ[ιος τ]ῶν. As noted above, the title of δήμοσιος ἰατρός was, in all likelihood, not yet used in 143 CE to denote the physicians who were included in the quota of those whom the city bestowed with privileges. Nutton, following Lewis, identified an upper tier of "approved physicians" with the public doctors whose earliest existence is documented by Oxyrhynchus to be between 170 and 173 CE.[240] The privileges of these physicians had to be approved by the local community or by a municipal institution.[241] In turn, the meaning of δημοσιεύων should best be translated here as "familiar" rather than as a legal qualification.[242] Thus, the grounds for both Psasnis's and Gemellus's petitions were that they were active physicians who treated patients regularly. In the absence of an institutionalized licensing system, it was up to patients to decide who was a proper physician. Physicians were first and foremost artisans, and, without securing the support of the community—their potential clients—they were forced either to travel in search of clients elsewhere or to choose another vocation. Therefore, it was the responsibility of the physicians themselves (and in their own interest) to secure their patients' trust.[243]

The case of Psasnis stands out, at least within the surviving corpora of evidence, because it is the only time a court endorsed the right of a physician to claim immunity from liturgies. As such, it offers a particularly helpful analysis of the identity of physicians during the High Empire and the nature of medical authority. First, it demonstrates the privileged position medicine enjoyed, both as a discipline and as a profession under Roman jurisdiction. But second, and just as important, it proves the crucial role of the demand for medical care in shaping the form of medical authority. Eudaemon saw no need to consult a medical expert concerning Psasnis's medical skills. Furthermore, the prefect's ruling confirmed that

his patients were the most suitable people to judge whether or not Psasnis was a physician and to deem whether he was capable to practice.

Conclusion

The purpose of this chapter is to examine how the professional physician was established in the Roman world. It has demonstrated that the emergence of medicine as a profession was a direct result of both the influence of Greek culture and science on the Roman world and the growing tendency within Rome toward urbanization. During the late Republic, this particular form of health care, and its associated health care providers, was encouraged by social and cultural changes within Rome, mainly in its upper classes, which gradually parted from the old Roman ways of self-sufficiency and adopted many Greek customs.

The decline of the Roman Republic and the establishment of the Principate led Roman legislators to bestow Roman citizenship and privileges upon physicians who were almost exclusively of Greek descent. As chapter 4 shows, the initial motive behind this legislation was to secure the availability of medical treatment for the newly created professional Roman army. The reliance of the *princeps* on the support of the troops for the stability of his reign forced the emperor to assure his soldiers that their well-being was his personal concern. Discussing Tiberius, Velleius Paterculus said that throughout the German and Pannonian War not one soldier, either above or below rank, fell ill without having his health and welfare looked after by the emperor with as much solicitude as if it was his chief concern.[244] In addition, the high cost of the army made the control of the army's health a priority to every general.[245]

Moreover, the administration of the new Principate relied on local aristocracies, encouraged urban centers, and favored Greek culture. These propensities supported the position of Greek medicine and its practitioners within the Roman world. In addition, Rome willingly inherited preexisting systems of health care administration, like that of the public physician, which were already widespread in the Greek East and in Roman Egypt. By granting privileges to physicians who practiced in urban centers, and by allowing the communities themselves to choose the physicians who would enjoy these privileges, the Roman government applied the same principles in the sphere of health care as in its management of the Empire as a whole. Allowing each city to choose its physicians must have provided them with a sense of self-governance and local identity.[246] The larger cities of the Greek world, such as Smyrna, Ephesus, and Athens, could have drawn notable physicians to reside in them and extend the cities' fame, whereas a small town in the Egyptian

chora could have secured the availability of a physician and the benefits it brought.

From the point of view of Roman law, physicians were seen as both practitioners of liberal arts and as craftsmen. As has been noted, Julius Caesar exempted physicians, along with liberal arts teachers, whereas Constantine exempted physicians as skilled workers, along with architects, makers of paneled ceilings, plasterers, carpenters, stone cutters, silversmiths, builders, veterinarians, stonemasons, gilders of arms, step makers, painters, sculptors, engravers, joiners, statuaries, workers in mosaics, coppersmiths, blacksmiths, marblemasons, gilders, founders, dyers in purple, layers of tessellated stones, goldsmiths, mirror makers, carriage makers, directors of the distribution of the water supply, glassworkers, workers in ivory, fullers, potters, plumbers, and furriers.[247] Thus, throughout the history of the medical profession in the Roman world, three autonomous, though not mutually exclusive, forces drove Roman interest in the status of physicians. The first was the need for military physicians. The second, perhaps an inheritance of the institution of the public physician of the Greek *poleis,* belonged under the more general title of "popular policies."[248] The third was a by-product of the governing system of the High Roman Empire, whereby authority was delegated to local aristocracies, with their preference for a civic way of life.

The history of the medical profession and the regulation of health care within the Roman world, however, were not shaped by formal institutions alone. Licensing of medical care did not exist. Likewise, no state agency managed the quality of care that those practicing as physicians offered. In addition, the privileges, tax immunities, grants of citizenship, and exemptions from civic duties that Roman law granted physicians were never conditioned by formal qualifications. The absence of a licensing system within the field of health care did not mean that those who were most suitable to offer medical care were not clearly marked, however. On the contrary, as the case of Psasnis shows, society filled the role of a modern licensing body by recognizing its best physicians. The identification process worked on many levels, encompassing social systems, cultural patterns, and the legal system. None of these factors alone could provide a basis for identification, though, and all three aspects needed to act together, demonstrating the complex nature of the health care system at this time. Roman law supported the judgment of the individual communities by delegating to them the right to choose their physicians, by means of the granting of privileges. Patients, therefore, played an important role in determining medical authority.

Patients' Understanding of Health and Illness

Across the spectrum of Greco-Roman life, people shared the experience of falling ill and seeking medical care. Although many of these men and women approached physicians, few restricted their search for treatment to physicians alone. Their words and deeds suggest that their notions of physicians and the discipline of medicine were not altogether separated in terms of practice, methodology, and rationale from their notions of other types of health care, particularly that offered by the gods. Patients' understanding of medicine and physicians therefore throws light on the nature of the Greco-Roman health care system and the power relations within it. It also helps modern students of Greco-Roman health care to comprehend the nature of the relationship between the ideas found in the works of the physicians and the practice of health care. Through a change in perspective to the demand for medical care rather than its supply, it becomes possible to learn more about the interaction between patients and healers.

The purpose of this chapter is to review: (1) how patients came to terms with their ailments, (2) how they understood the therapeutic procedures they underwent, and (3) the expectations they had of their health care providers. By focusing on the patient, the model in which medical knowledge is passed in a linear fashion down from practitioner to patient can be replaced with one in which transmission occurs within a web of knowledge, with the diffusion of therapeutic ideas and practices taking place both among and between patients and practitioners. By learning whether patients chose to adopt, adapt, or refuse the advice of their physicians, further aspects of the Roman physician and, more generally, of the Greco-Roman health care system become apparent.

Patients and Their Healers

A dedication discovered in front of the Porta Appia records one M. Ulpius Honoratus, a cavalry officer in the first half of the second century CE, expressing his appreciation of his physician L. Iulius Helix for his attentive care. Helix received Honoratus's gratitude alongside two of the most popular healing deities in the Greco-Roman world: Asclepius and Hygieia.

> Aesculapio et Hygiae M. Ulpius Honoratus dec(urio) eq(uitum) sing(ularium) imp(eratoris) n(ostri) pro salute sua suorumque et L. Iuli Helicis medici, qui curam mei diligenter egit secundum deos, v(otum) s(olvi) l(aetus) l(ibens) m(erito).[1]
>
> Marcus Ulpius Honoratus . . . set this memorial up to Aesculapius and Hygieia, in return for his own health, his family's, and his doctor's, Lucius Julius Helix, who, alongside these gods, has taken expert care of me.

As a cavalry officer, Honoratus was likely to have turned to a military physician, who was, in most cases, of Greek origin or training.[2] The two celestial recipients of Honoratus's gratitude, Asclepius and his daughter Hygieia, were among the most popular healing deities in the Greco-Roman world. In fact, physicians in the Roman imperial army and elsewhere often made votive offerings to Asclepius and Hygieia and had treated them as their patrons since the emergence of the cult of Asclepius in the fifth century BCE.[3] The association of physicians with Asclepius and Hygieia was part of the Roman inheritance from the Greek world. During the Hellenistic era in Athens, public physicians made dedications to Asclepius twice a year on behalf of the patients they healed: ἐπειδὴ πάτριόν ἐστιν τοῖς ἰατρο / ῖς ὅσοι δημοσιεύουσιν θύειν τῶι Ἀσκ / ληπιῶι καὶ τεῖ Ὑγιείαι δὶς τοῦ ἐνιαυ / τοῦ ὑπέρ τε αὑτῶν καὶ τῶν σωμάτων ὧν ἕ / καστοι ἰάσαντο (whereas it is an ancestral custom of the physicians who are in the service of the state to sacrifice to Asclepius and to Hygieia twice each year in behalf of themselves and of the people whom they heal).[4] A dedication by the Athenian *boule* to public physicians within the Asclepieion marked the affinity between Asclepius and physicians, and between the cult practiced in the Asclepieion and the art of medicine.[5]

This close connection, along with its institutional manifestations, was still present in the Roman era. A Pergamene inscription dating back to the first two centuries CE shows that physicians themselves encouraged the view that Asclepius's

grace was beneficial to their patients. It is a votive offering dedicated by a physician to Asclepius for an act of divine healing:

[–⏑–×–] ἰητὴρ ἠδὲ φωτῶν σκηνικῶν
[–⏑–×–] Μενοίτας Μυλασεὺς Ἀσκληπιῶι
[–⏑–×–τί]θησι μυρίαν ἔχων χ̣[άρι]ν̣.[6]

Doctor of [. . .] and of men of the theatre | [. . .] Menoitas from Mysala to Asclepius | [. . .] sets up full of gratefulness.

By the time Honoratus expressed his gratitude for his healers in the form of an inscription, the association between Asclepius and his daughter and the practice of physicians had been cemented in the social, political, and religious institutions of the Greek world. As shown in chapter 1, the Roman world was keen to adopt some of the key elements of the Greek health care system, with its particular set of health care providers, religious cult, and explanatory model of health, illness, and therapeutics.[7]

The Roman world, consciously or unconsciously, also adopted the power relations that this health care system encouraged. Thus, when Honoratus thanked Helix for curing him with the help of Asclepius and Hygieia, he was not expressing a dissident voice or behavior. Asclepius was the most renowned healing deity during the High Roman Empire. The Asclepieia were many and prosperous. The sick flocked to them, expressing a widespread belief that Asclepius could cure them. Likewise, physicians were prominent figures in the medical market place; they enjoyed the support of the Roman government in the form of immunities and were encouraged to serve in the Roman armed forces. Honoratus turned to two of the most obvious choices when seeking medical aid. His dedication to two prominent healing deities suggests that he was not making a general act of veneration but that he understood his cure to be the result of the joint efforts of Helix, Asclepius, and Hygieia. Moreover, a general aim of this study is to show that the proximity between temple medicine and scientific medicine—in terms of the *loci* in which health care was provided, the identity of those providing it, and the comprehension of the sick as to the nature of the medical procedures they underwent—suggests that dedications to physicians and deities associated with healing were not pure formalities. In turn, the healers were careful not to attribute their skills to either temple or scientific medicine but rather to allow their clients to hold an understanding of their condition and the rationale of the healing processes they experienced as either religious or scientific. Various other dedicatory inscriptions do not distinguish

between the help physicians and Asclepius could (and did) provide. One such inscription, most likely from the Asclepieion in Cibyra,[8] probably dating back to the second or first century BCE, commemorated the therapeutic measures taken by the god and a physician named Dionysius, which brought the dedicator back to health:[9]

> εὐχαρι[στήριον τῷ θεῷ, ὅτι ἐσώθη [—-κ]αὶ τῇ Τύχῃ τῆς πόλεως καὶ Διονσίῳ Διονυσίου ἰατρῷ [τῷ] θεραπεύ(σ)αντι με.[10]
>
> Gratitude to the god for it is cured—and to Tuche of the city and to Dionysius, son of Dionysus the physician who cured me.

An even more interesting inscription from Havza, which dates back to the second or third century CE, records the gratitude of one Proclus to Asclepius and two other individuals, one of whom was most likely an *archiatros:*

> Πρόκλος Σινωπ[εὺς θεραπευθεὶς τὰς]
> ῥεῖνας εὐχαρι[στεῖ τῷ Ἀσκληπιῷ καὶ ταῖς]
> Νύμφαις καὶ Γορ[δίανῷ(?) τῷ ἀρχιάτρῳ]
> τῷ πάντων φίλ[ῳ λέγοντι πάντοτε ὅτι "προ]-
> κόπτιν πρέπι." [παντοῖα ἄλλα πά]-
> θη δὲ καὶ τοὺς υ[ἱοὺς ὁ Γορδιανὸς(?) ἰάσατο]
> αὐτοῦ Σύμφορο[ν καὶ {²e.g.}² Προκλιανόν].
> Χρῆσστος <Σ>ινω[πεὺς ὁ Πρόκλου {²e.g.}² ἀδελφὸς]
> λιθουργὸς ἐποίει.[11]
>
> Proclos Sinopeus, having the nose cured, is grateful to Asclepius and to the Nymphs and to Gordianos the *archiatros,* everyone's friend, who forever says that "it is necessary to prosper." Gordianos cured many other ailments [of Proclus] and of his sons Symphoros and Proclianos. Chrestos Sinopeus the stone cutter, Proclos's brother, made [this dedication].

Proclus was grateful for having his nose cured. His gratitude was addressed to Asclepius, whose sanctuary lay in proximity to the famous hot water springs;[12] the Nymphes, whose association with Asclepius was rare;[13] and Gordianus, the all-loving *archiatros*.[14] Although various afflictions of the nose were mentioned in the Hippocratic corpus, mentioning a specific body part in a votive inscription is quite unusual.[15] Therefore, this attribution of a cure of a specific bodily organ to both Asclepius and to a physician was not the result of *topos.* Rather, it was more likely to echo the genuine belief of the dedicator and the medical condition

from which he thought himself to be cured. Moreover, on the basis of this inscription, no dichotomy seems to exist in the patient's mind between the assistance Asclepius and an *achiatros* could offer.

Dedicatory inscriptions made by supplicants who were healed by a deity, either with or without the help of physicians, are commonly referred to as votive offerings. In order to establish a good personal relationship with a deity, the ancient Greeks and Romans used one or more of three available methods: prayer, sacrifice, and votive offerings.[16] Although they are often mentioned side by side and share the common feature of giving something to the god, a clear division between sacrifices and votive offerings can be easily outlined: a sacrifice was to be consumed by either god or men, whereas a votive offering was essentially durable.[17]

Much like sacrifices, though, votive offerings were often presented to redeem a vow previously made in a prayer.[18] In Greek inscriptions, this idea was often expressed by κατ' εὐχήν. The Latin version, ex-voto, appears so frequently that it came to be used as a noun denoting "votive offering."[19] Temples in general and the Asclepieia in particular were cluttered with votive offerings.[20] A *lex sacra* from the Asclepieion in Rhodes proclaimed that no one was permitted to request that an image be raised or some other votive offering set up in the lower part of the sanctuary or in any other spot where votive offerings prevent people from walking past.[21] The visual space in the temple was dominated by ex-votos. They all told stories of miraculous cures. The ex-votos informed supplicants who arrived in the temple on how to behave and what to expect, and they inspired the worshippers by letting them know of the numerous times the god had saved his supplicants in the past. Thus, both as a means for reassuring supplicants and as a mechanism of indoctrination, the ex-votos played a prominent part in shaping patients' understanding of the therapeutic process.

Examination of the institutions that shaped patients' experiences during the High Roman Empire, such as ex-votos, religious cult, or social interactions in general, must be done in a broader context. Trends in the history of mentality cannot be measured or assessed without comparing what happened before or after the period under scrutiny. This also holds true for individuals' expressions of their experiences as patients, such as the ex-votos. After the Minoan anatomical votive offerings, datable to the end of the third millennium BCE and the first half of the second millennium BCE, the earliest to be found in Greek are Ephesian ones, at the end of the eighth and the first half of the seventh centuries BCE. They seem to have become more popular in the fifth century BCE, but the majority of evidence originates from the fourth century BCE onward, predominantly from the temples

of deities associated with healing, such as Asclepius, Amphiaraus, Amynos, and Heros Iatros. Asclepius was by far the most popular of them all. The supplicants' choice of one particular deity does not seem to have been random or motivated by considerations of convenience alone. For example, women who needed divine help with matters connected to childbirth and gynecology were typically inclined to seek the help of one of the deities associated with gynecology, like Artemis or Aphrodite, rather than Asclepius or any other deity.[22] The popularity of the healing temples during the High Roman Empire was facilitated by the *pax Romana* and by the Roman administrative system. It shaped the emergence of a medical discourse in the fifth century BCE, which systematically infiltrated the healing temples. In consequence, it was one of the most influential phenomena in shaping patient experiences throughout classical antiquity. It led them in their choices of health care provider and how they came to terms with their medical conditions.

Votive offerings often portrayed an ailing body part, which the supplicants would beseech the god to cure.[23] The high level of detail on some of these votive offerings has led some modern scholars with medical training to endeavor a diagnosis and has even led some to suggest that a certain level of local specialism evolved in the various Asclepieia.[24] In addition, inscriptions containing lists of votive offerings, predominantly of silver and gold, were dedicated to Asclepius.[25] Among these, graphic representations of body parts have been found. Inscriptions named the diseased parts Asclepius was asked to cure, such as the eyes, head, face, nose, mouth, teeth, abdomen, heart, genitals, and more.[26] A collection of terracotta votive offerings from the Asclepieion in Corinth includes many such depictions of anatomical parts.[27] These portrayals indicate an understanding of illness that was based on somatic activities and was the result of the emergence of a particular type of medical discourse (i.e., the Hippocratic tradition) that started asking "how" rather than "why." Some silver votive tablets with body parts have been found in the sanctuary of Demeter in Mesembria.[28] Votive offerings were also popular among women, particularly in respect to resolving issues in relation to childbirth. Figures of pregnant women,[29] replicas of wombs,[30] and representations of childbirth appear regularly among the votive offerings found in temples.[31] Much like the cult of Asclepius itself, the language used in the votive offerings to the god of medicine, as well as to various other deities, was Pan-Hellenic and came to prevail in most parts of the Roman world.

The inclination to thank deities along with physicians for curing parts of the body appears in the inscription from Cibyra mentioned above. This votive offering was erected by one Lucius, a *vernaculus,* after he was cured from an illness in

his genitals. In addition to Asclepius, Lucius also thanked Trophimus and Dionisius, who, following the reconstruction of Robert et al., is taken to have been a physician.[32] Apparently, even a traditional platform for expressing thanks to the gods, such as votive offerings, also reveals a widespread shift in anatomical perception and in the power relations in the field of health care.

As the testimonies of the sick demonstrate, one professional language was shared by both physicians and priests, within the temple and outside. The opening sentence of the famous fourth-century BCE Epidaurian inscription of divine cures explained that these are the ἰάματα τοῦ Ἀπολλωνος καὶ τοῦ Ἀσκληπιοῦ (the cures of Apollo and Asclepius).[33] Tradition had it that Hippocrates himself copied the cures recorded on the Coan votive tablets and based his future treatments on these accounts. According to Strabo:

> φασὶ δ' Ἱπποκράτην μάλιστα ἐκ τῶν ἐνταῦθα ἀνακειμένων θεραπειῶν γυμνάσασθαι τὰ περὶ τὰς διαίτας.
>
> and it is said that dietetics practiced by Hippocrates were derived mostly from the cures recorded on the votive tablets there.[34]

Pliny affirmed that this tradition was well known and accepted in Rome, at least from the time of Varro:

> is, cum fuisset mos, liberatos morbis scribere in templo eius dei quid auxiliaturum esset, ut postea similitudo proficeret, exscripsisse ea traditur atque, ut Varro apud nos credit, templo cremato iis instituisse medicinam hanc, quae clinice vocatur
>
> it had been the custom for patients recovered from illness to inscribe in the temple of that god an account of the help that they had received, so that afterwards similar remedies might be enjoyed. Accordingly, it is reported that [Hippocrates] wrote out these inscriptions, and as our countryman Varro believes, after the temple had been burnt, founded that branch of medicine called "clinical."[35]

Thus, the contemporaries of Varro, Strabo, and Pliny were likely to believe that the cures Asclepius prescribed to his supplicants contained medical knowledge that physicians should use in order to meet their patients' expectations.[36] Notably, none of these authors was a physician. Rather, the views they recorded should be taken as representative of the *communis opinio* among laymen. Patients, then, were not troubled by any supposed divisions between temple and scientific medicine or between different types of healers. From the patients' point of view, all the

practitioners were operating within the same health care system, with a shared medical language, and this included healers who were both human and divine.

Physicians and Temple Medicine

It was natural for patients to hold such dual beliefs; they were supported by the wider medical discourse. Ever since the emergence of the cult of Asclepius and the appearance of the first treatises of the Hippocratic corpus, the term *iamata* (ἰάματα) had the same use and meaning in the context of scientific medicine (from the Hippocratic authors onward) as it had in temple medicine.[37] The extensive use of medical vocabulary in votive inscriptions suggests that their readership, namely, the worshippers who arrived in the Asclepieia looking for cure, saw no dichotomy between the means, methods, aims, and achievements of physicians and of gods. The portrayal of medicine by Plato, Aristotle, and others as an archetype of *technē* (τέχνη) and of physicians as professionals par excellence, along with the association of Asclepius's *iamata* with the prescriptions attributed to Hippocrates, proves that the medical practice in the Asclepieia was not experienced by contemporaries as being different in form, practice, or rationale from that undertaken by physicians.

The affinity between these two allegedly conflicting medical authorities, that of Asclepius and that of physicians, is widely attested to from the emergence of healing sanctuaries in Attica, which occurred during the second half of the fifth century BCE (cf. the Asclepieion of the Southern Slopes, which was erected in 420/19 BCE, and the Amphiaraeion of Oropus, which was founded between 421 and 415 BCE), and the appearance of Hippocratic medicine.[38] In fact, much like the teachings of some of the first Hippocratic treatises, such as *On the Sacred Disease,* the practices within the healing sanctuaries were substantially different from those of the *kathartai*.[39] *On the Sacred Disease* demonstrates how common it was to address epilepsy by means of purification, and this was also true of madness.[40] The attack made by the treatises' author was not directed against temples and shrines per se but against those who claimed the ability to drive out demons and compel the gods to provide help by means of charms and chants.[41] This author argued that because the whole natural world was divinely created, the means to cure illnesses existed in nature as well as the illnesses themselves. Therefore, there was no need to appeal to divine interventions. However, although this view might have been prominent among the foremost physicians of the fifth century BCE and after, no evidence shows that patients viewed any distinction between religious healing and medi-

cine, except that of the title of the health care provider and the *locus* in which health care was administered.[42]

In the healing sanctuaries, the sick were instructed to follow a strict regimen, prescribed by sacred laws. A study of these laws reveals that they were not incompatible with the teachings of Hippocratic medicine.[43] Within the Asclepieia, the sacred laws functioned as an organizing mechanism.[44] A votive offering from Epidaurus exemplifies how the sacred law guided a supplicant—a mute child—who arrived in the Asclepieion and acted in accordance with the commands of the sacred law ([ἐπόησε τὰ] νομιζόμενα).[45] For example, in the *lex sacra* from the Pergamene Asclepieion (which has been dated to the second century CE on the basis of the form of its letters, although the ritual law itself may be much older), the prescriptions provided by Asclepius are referred to as τοῦ Ἀσκληπιοῦ τὰ ἴατρα, "the cures of Asclepius."[46] On the basis of the vocabulary, the supplicants were unlikely to have distinguished between the type of cures that Asclepius offered and those that were provided by physicians.[47]

Physicians were equally inclined to allow their patients to see the treatments that they provided, especially when involving dreams, as being compatible with those prescribed by Asclepius and other deities. In the Greco-Roman world, it was common in the dream experience to see the dream figure as existing objectively in space, independent of the dreamer.[48] The Greeks never spoke of *having* a dream but of *seeing* a dream, which explains why dreams were often taken as a favored means of the gods to communicate with mankind.[49] This almost unanimous comprehension that certain dreams were mantic explains the widespread use of dreams and the stimulation of dreams as part of medical treatment,[50] frequently by incubation. Incubation was extensively practiced in the sanctuaries of Asclepius[51] as well as others, such as that of Amphiaraus at Oropus, the oracular shrines like the Daunian ones of Calchas,[52] and Podalirius.[53] Serapis and Isis also cured through dreams, and incubation was practiced in their temples as well. Furthermore, the temple of Serapis in Delos employed ὀνειροκρίται, professional dream interpreters.[54]

After the emergence of Hippocratic medicine, physicians were inclined to use the content of their patients' dreams in order to form a diagnosis. The Hippocratic author of the treatise *On Regimen* considered dreams an inherent part of his subject matter. In the fourth part of his work he specifically discussed dreams: "Anyone who has learnt thoroughly about the signs that come up in dreams will find that they have an important authority regarding all things."[55] As for their nature, this author held that certain dreams were godly and foretold the future of cities and

individuals.[56] The meaning of these dreams was only accessible with the help of those who possessed the art of the interpretation of dreams. However, the dreamer was advised to consult a physician, not a dream interpreter, when the dreams concerned his or her physical symptoms.[57] Yet, this author did not provide criteria for distinguishing mantic dreams from those that were indicative of somatic activities. This failure to distinguish between mantic dreams and somatic ones, and to provide clear guidance to both healers and patients regarding the jurisdiction of physicians and other types of dream interpreters, was not rectified by any of the ancient medical authors. From the scarce testimonies of patients comes no evidence that they were conscious of any guiding rules, either. Thus, the most plausible explanation for this ambiguity is that in terms of discipline, practice, and the public image of its agents, medicine and *oneirocritica* were not altogether separated.

This attitude toward dreams had a strong influence on future physicians. The Hellenistic physician Herophilus of Alexandria was also interested in the nature of dreams, and, like his Hippocratic predecessors, he used dreams in his medical practice. Herophilus introduced a tripartite division of dreams, which, according to Heinrich von Staden, "seems to have launched a remarkably rich Hellenistic tradition of dream theory."[58] Direct references to Herophilus's dream theory are found only in Aëtius and the pseudo-Galenic *De Historia Philosopha.* The latter, however, rests heavily on Aëtius or on a common source. Ps. Plutarch *Placita Philosophorum* is identical to Aëtius, and von Staden was able to demonstrate how Herophilus's theory of dreams influenced Poseidonius,[59] the Stoics,[60] and Philo.[61] Patristic authors, such as Tertullian,[62] Prudentius,[63] Cassianus,[64] and St. Augustine,[65] were also influenced by Herophilus's approach to the nature of dreams. Herophilus's dream theory included a category of god-sent dreams and another category of dreams that resulted from bodily activity.[66] Only the latter category interested him as a physician.[67] Like his Hippocratic predecessor, Herophilus provided neither criteria for dividing dreams into mantic and somatic nor the appropriate professional authority for interpreting them. That Herophilus clearly influenced Galen's view of dreams has been argued convincingly, and, with this influence, a similar inclination to leave the somatic and mantic approach to the interpretation of dreams blurred.[68]

These Hippocratic views (and, indeed, Hippocratic medicine) were still pertinent during the High Roman Empire. For example, Rufus of Ephesus, a physician of the Flavian age, also used dreams to form a diagnosis.[69] Rufus thought that dreams were symptomatic of malfunctioning humors.[70] Rufus's methodology for interpreting his patients' dreams was therefore to listen to their accounts of their

dreams and find traces of the movements of the bodily humors.[71] Not clear, however, is whether Rufus's patients thought him to be interpreting their dreams as a physician or as a seer. On the basis of the work of the second-century CE dream interpreter Artemidorus, patients were most likely oblivious to such a dichotomy.

Born in Ephesus,[72] Artemidorus wrote many works (now lost) before composing his work on dreams in the mid- to late second century.[73] Artemidorus divided his work into five books, dedicating the first three to Cassius Maximus.[74] The first two books are organized systematically by subject matter. The third book is a supplement, explaining points that Artemidorus assumed a professional would already know.[75] The fourth book, which Artemidorus addressed to his son as a guidebook for the prospective professional dream interpreter, is another supplement. The fifth book consists of ninety-five dreams known to him to have come true.[76] Artemidorus's main interest in dreams lay in their ability to predict the future. Not all dreams could have this capacity, and Artemidorus drew a distinction between dreams with a predictive force (ὄνειροι), and those that were only indicative of the present state of affairs (ἐνύπνια).[77] Predictive dreams, which included visions and oracular dreams, so Artemidorus explained, could be divided into two subcategories: dreams that predicted the future directly (θεωρηματικοί) and those that predicted the future allegorically (ἀλληγορικοί).[78] Although Artemidorus's primary interest was not medicine, he has numerous examples of dreams that predicted medical problems, portrayed the medical advice of a god, or were a sign of ill health.

A contextual analysis of Artemidorus reveals implicit connections between dream interpretation and medicine. Artemidorus borrowed patterns of thinking from contemporary medical thought. The High Roman Empire had three schools of medicine: Empiricists,[79] Rationalists, and Methodists.[80] They offered different and incompatible approaches to medicine, as we learn from the conversation in Galen's dialogue, *On Medical Experience*. The Empiricists stressed the importance of experiment, reason was key for the Rationalists, and the Methodists argued that medicine was "knowledge of manifest commonalities." Artemidorus himself was clearly influenced by the Empiricist school. Indeed, the three main elements of the Empiricist approach to medical knowledge—tradition (ἱστορία), analogy (μετάβασις τοῦ ὁμοίου), and primary experience (πεῖρα or τήρησις)[81]—constituted Artemidorus's own approach to dream interpretation.

Although treatises concerning dream interpretation for the purpose of predicting the future and medical works that discussed the nature of dreams and their relevance to the medical practice belonged to different genres, the gap between the

practice of a dream interpreter and a physician who used dreams to form a diagnosis could not have been too wide, particularly when seen from the patient's point of view. Physicians were inclined to entertain their patients' belief in the predictive nature of their dreams and, according to the evidence, they genuinely believed in it themselves. Even the great Galen, who was familiar with Artemidorus's work, considered him and his discipline authoritative.[82] Furthermore, Galen accepted that certain dreams were mantic and consequently should be taken as messages from the gods. In fact, he could tell of a god-sent dream of his father, Nikon, which first encouraged him to study medicine.[83] Galen even recorded his own experience as a patient: Asclepius sent him a dream concerning his health and advising a course of action.[84] He then followed Asclepius's prescription and his life was saved.[85] Another god-sent dream forbade Galen to take part in the highly challenging military expedition of Marcus Aurelius against the Germans in the late 160s.[86] Thus, Galen's work provides evidence of the popularity of the temple of Asclepius and of the widespread belief in the curative contents of the dreams he sent.[87]

From the foundation of the healing temples onward, the gods never dwelt upon their patients' pasts. Their prescriptions pertained solely to the course their patients must follow in the future.[88] In addition, unlike that of the *kathartai,* the healing focused on individuals and not communities.[89] All dedications and ex-votos from the fifth century BCE onward depicted an individual or a family with a clinical observation from which the healing deity was asked to make a cure.[90] From this, Gorrini concludes that illness or disease ceased to be regarded as the result of collective impiety, and the ill were no longer seen as having offended the gods but rather as suffering from a particular and personal complaint that had to be cured through a particular and specific treatment. In consequence, the parallel spread of Hippocratic medicine and rise of healing heroes is not at all contradictory. Any apparent contradiction recedes with the observation that, whereas the *kathartai* resorted to magical incantations, the priests of the healing heroes used practices similar to those of the Hippocratics.[91]

A dedication to Asclepius from the Pergamene Asclepieion by one Publius Aelius Theon, a near contemporary of Aelius Aristides and Galen, reveals the similarity between the therapeutic measures prescribed by Asclepius and those prescribed by some of the most distinguished physicians of the Greco-Roman world.[92] The case of Theon is the first known testimony from Pergamum of a divine cure that was not restricted to therapeutic measures but actually narrated the god's prescriptions. As was typical of the testimony of patients (and although Asclepius prescribed Theon very specific instructions), a particular ailment is not mentioned in

the inscription. However, Müller's comparison of Asclepius's prescriptions to Theon with those found in the works of known physicians reveals that Asclepius shared the physicians' therapeutic measures and approach.[93] Most Greco-Roman physicians from the Hippocratics onward saw diet and regimen as the most effective means to cure patients, and such a belief was also prevalent in temple medicine.[94] Asclepius commanded Theon to consume half an onion every morning. Celsus, Galen, and Dioscorides also prescribed onion, and Pliny alluded to onion treatment.[95] In addition, Theon was instructed to eat fifteen pepper seeds each day, a regimen often prescribed by ancient physicians.[96] The most common use of pepper and onion in Greco-Roman medicine was as a warming agent.[97] Also noteworthy is that Asclepius commanded Theon to consume the onion and pepper in the early morning (ἕωθεν). An explanation for the emphasis of Asclepius on the time of day in which the cure must be taken might be provided by Pliny, who reported that the school of the Asclepiads held that onion promoted a healthy complexion, and if eaten daily on an empty stomach, preserved a good state of health, was useful to the stomach, loosened the bowels by putting the air in motion, and dispersed hemorrhoids when used as a suppository.[98]

However, as the votive offerings implicitly revealed, and becomes even clearer when we turn to the *Sacred Tales* of Aelius Aristides, the influence of Hippocratic medicine and its aftermath on temple medicine should not be seen as a top-down interaction between active practitioners/physicians and passive supplicants/patients. Because of the nature of the medical market place, all those involved in the provision of health care were conscious of and attentive to their prospective clients' expectations. Patients/supplicants must have encouraged the assimilation of Hippocratic language and methods within the healing sanctuaries by their expectations to find them there. Such an interpretation reveals that patients often found the capabilities of physicians and healing deities complementing or even converging with one other. An inscription from Lebena is a case in point. Dating from the second century BCE, it tells of Demandrus, son of Calabis, who suffered from pains in his hips before Asclepius commanded him to go to his temple ὅτι θεραπεύσειν.[99] This command reveals some of the main attributes of the Greco-Roman health care system, as it evolved from the fifth century BCE until late antiquity. Demandrus's condition is well defined and specific, no doubt the result of the emergence of Hippocratic medicine with its more systematic nosologies and its influence on intellectual life in the Greco-Roman world.[100] However, both the god's command and the ambiguous meaning of the verb θεραπεύω, which meant both to do service to the gods and to treat medically, reveals the nondichotomist nature of classical

medicine in its attitude toward science and religion. It was assumed gods could perform the same actions as physicians. For instance, as soon as Demandrus arrived in the temple, Asclepius operated on him while he was asleep, and he became well. The rise of surgery, and with it the vocabulary to describe it, can be dated from the fifth century onward. The reference to Demandrus being operated on by the god also demonstrates the diffusion of professional medical notions, techniques, and vocabulary into the cult of Asclepius.[101] The patient's role in shaping the therapeutic practices within the Asclepieia is made visible by an examination of the shift between the earliest epigraphic reports of *iamata,* like those from Epidaurus and those of Aristides' day and age.[102] The early Epidaurian *iamata* addressed those with no medical knowledge, whereas later testimonies indicate a certain level of familiarity with medical practices and vocabulary.

Health care providers, both physicians and those associated with a deity, shared one professional language, which can be demonstrated by an analysis of their use of terms for illnesses and drugs. The Epidaurian *iamata* state that an Athenian woman by the name of Ambrosia arrived in the Epidaurian Asclepieion with one blind eye. Ambrosia was reluctant to believe that the lame and the blind could be cured merely by seeing a dream, but she was convinced after seeing one herself in which Asclepius instructed her to make a dedication attesting her disbelief. After she did this, the god cured her by cutting into her sick eye and pouring a drug into it:

> Ἀμβροσία ἐξ Ἀθανᾶν
> [ἀτερό]πτ[ι]λλος. αὕτα ἱκέτις ἦλθε ποὶ τὸν θεόν· περιέρπουσα δὲ
> [κατὰ τ]ὸ ἰᾳρὸν τῶν ἰαμάτων τινὰ διεγέλα ὡς ἀπίθανα καὶ ἀδύνα-
> [τὰ ἐόν]τα, χωλοὺς καὶ τυφλοὺ[ς] ὑγιεῖς γίνεσθαι ἐνύπνιον ἰδόν-
> [τας μό]νον. ἐγκαθεύδουσα δὲ ὄψιν εἶδε· ἐδόκει οἱ ὁ θεὸς ἐπιστὰς
> [εἰπεῖν], ὅτι ὑγιῆ μέν νιν ποιησοῖ, μισθὸμ μάντοι νιν δεησοῖ ἀν-
> [θέμεν ε]ἰς τὸ ἰαρὸν ὖν ἀργύρεον ὑπόμναμα τᾶς ἀμαθίας. εἴπαν-
> [τα δὲ ταῦτ]ᾳ ἀνσχίσσαι οὐ τὸν ὄπτιλλον τὸν νοσοῦντα καὶ φάρμ[α]-
> [κόν τι ἐγχέ]αι· ἁμέρας δὲ γενομένας ὑγιὴς ἐξῆλθε.[103]

> Ambrosia from Athens, blind in one eye. She came as a suppliant to the god. Walking about the sanctuary, she ridiculed some of the cures as being unlikely and impossible, the lame and the blind becoming well from only seeing a dream. Sleeping here she saw a vision. It seemed to her that the god came to her and said he would make her well, but she would have to pay a fee by dedicating a silver pig in the sanctuary as a memorial for her ignorance. When he had said these

things, he cut the sick eye and poured a medicine over it. When day came she left well.

The term used to describe Ambrosia's illness (ἀτερόπτιλλος) was a commonly used medical term.[104] Herodian the Grammarian defined ἑτερόφθαλμος: ὁ ἀφῃρημένος τὸν ἕτερον τῶν ὀφθαλμοῶν, ὡς ὁ Φίλιππος.[105] The inscription also depicts Ambrosia's eye as sick (τὸν ὄπτιλλον τὸν νοσοῦντα). Both the application of preexisting Greek nosology and the understanding of the eye to be sick demonstrate the influence of Hippocratic medicine on the cult of Asclepius and temple medicine.

Two inscriptions from Crete reveal the influence of Hippocratic medicine on Asclepius's prescriptions to his sick supplicants. The first is a dedication to Asclepius from Poplius Rufus, whom Asclepius cured of a two-year violent cough. Having invited him to his temple, Asclepius instructed Rufus to nibble on arugula on an empty stomach, Italian wine flavored with pepper, starch with hot water, powder of the holy ashes and some holy water, an egg and pine resin, moist pitch, iris with honey, boiled quince and wild purslane, and fig with holy ashes.[106] As has been noted before, diet was widely used by Greek physicians as a means to cure illness.[107] Even Galen argued that the best physician was the one who knew how to accomplish by diet and drugs what less able physicians achieved with a knife.[108] In another dedication by the same Rufus, this time concerning his painful right shoulder, he narrated how Asclepius treated him with a plaster of barley-meal mixed with old wine and a pinecone ground with olive oil, and at the same time a fig and goat's fat, and then milk with pepper, wax-pitch, and olive oil boiled together.[109]

Both of Rufus's inscriptions concerned very specific ailments, which were described using a vocabulary that was also used by physicians. Cough (βήσσοντα) itself, and the verb from which this noun was derived (βήσσω), was commonly used by medical authors from the Hippocratics until Galen and, indeed, beyond. Oribasius and Pliny recommended arugula for various purposes.[110] Likewise, Dioscorides and Oribasius, among others, advocated starch in warm water for digestive problems and various other internal illnesses.[111] Pliny was also familiar with the medicinal attributes of iris.[112] Quince and its consumption with wine, honey, or flour calls to mind a prescription of Oribasius.[113] Figs were also thought to hold purifying qualities and were therefore suggested by Oribasius.[114] All of these treatments closely resemble the modus operandi advised by Celsus for a cough.[115] The treatment for Rufus's shoulder pains is similar to what Celsus prescribed.[116] Rufus's two dedications prove that he received the same type of treatments from

Asclepius as were commonly advocated by professional physicians. In addition, they were not dissimilar to what Asclepius was in the habit of prescribing his other supplicants in Pergamum. This resemblance suggests both that there was an active and continuous dialogue between patients and temple healers in the vicinity of the Asclepieion and that patients themselves expected to receive very similar prescriptions from doctors and deities.[117]

Patients often described the measures of physicians and gods complementing each other. Felix Asianus, a slave of the priests of the Bona Dea, for example, made a dedication to the goddess after she restored his lost eyesight.[118] Asianus turned to the Bona Dea after his physicians ceased to help him following ten months of attempted care: "derelictus a medicis post menses decem bineficio [*sic*!] dominaes medicinis sanatus" (having been deserted by the physicians after ten months, by the kindness of the *domina* of medicine he had healed). The language of Asianus suggests that he saw no difference in methodology between that of the *medici* and the Bona Dea. Asianus even described the goddess as *dominaes medicinis.* As far as the patient Asianus could tell, the only distinction between the physicians and the goddess was in the quality of their medical skill.[119] A fragment of Aelianus, the second-century CE sophistic declaimer, describes how a blind person instructed by Asclepius to anoint his diseased eyes with boar's fat and vinegar actually turned to an unnamed physician for an explanation of this remedy's rationale. An appeal to physicians for an explanation of Asclepius's prescriptions was also a habit of Aelius Aristides.[120] The physician explained that one part of the treatment contracted the tumor through its acidity and the other anointed the eyes and nourished them.[121] The inclination of a supplicant of Asclepius to consult a physician regarding the nature of the god's prescription and the willingness of that physician to provide him with an answer implies that this sort of consultation was not uncommon and was considered constructive on both sides of the patient/healer divide.

Epictetus, the second-century CE Stoic philosopher, explained this common habit by describing Asclepius's skills in philosophical terms: ὡς ὁ Ἀσκληπιὸς εὐθὺς ὑποδεῖξαι δύνασαι, πῶς θεραπεύοντες αὖθις ἔσονται (like Asclepius, you are able at once to show by what treatment others will become well again). Epictetus claimed that there was a comprehendible system behind Asclepius's cures.[122] In fact, Epictetus cited Asclepius as a counterexample to charlatan healers who claimed they could heal without being able either to explain their therapeutic measures or to repeat an occasional success. Seeing a medical rationale behind Asclepius's cures was thus common. Writing about his experiences as a supplicant of Asclepius, Aristides advised his readers who needed the actual prescriptions the god

gave him to consult his notebooks.[123] Two centuries later, Iamblichus argued that, not only did no difference exist between temple medicine and scientific medicine, but that the cult is the foundation of the art.[124] He explained that, within the Asclepieion, illnesses were healed by divine dreams, and through the instruction of these nightly visions the art of medicine was formed.[125]

Even the patients of Galen, who boasted that none other than Marcus Aurelius marked him as an excellent physician and the first among philosophers,[126] were reluctant to distinguish between his vocation and methods and those of other types of healers such as magicians and diviners.[127] By no means did they force themselves to restrict their quests for health care to one discipline of healing. In his polemic manner, and commenting upon the Hippocratic legacy of the importance of prognosis, Galen described the poor state of the medical profession in his day by arguing that contemporary patients were so unaccustomed to encountering a qualified physician that, in the rare instances they did find a physician who performed prognosis successfully, they assumed that he was a magician rather than a physician.[128] Galen shows that in his day patients did not see any difference between physicians and other types of health care provider in terms of *technē* or discipline.[129]

Galen, who practiced in Pergamum early in his career,[130] attested that the worshippers of Asclepius who arrived in the famous Pergamene Asclepieion often combined temple healing with the consultation of physicians. According to Galen, a large number of physicians in Pergamum competed with Asclepius for their patients' trust. In addition, these patients often preferred to follow the god's regimen over that of the physicians. In the picture Galen depicted, neither patients nor healers found the two authorities to be mutually exclusive. A critical reading of Galen's work also confirms that physicians themselves shaped their prescriptions, methodology, and even language with their patients' expectations in mind. For example, Galen told of a prosperous Thracian who arrived in the Pergamene Asclepieion following Asclepius's command. In his dream, the god said that he should drink a drug produced from vipers on a daily basis and that he should anoint his body. Galen reported that as a result of the god's treatment, the Thracian's disease turned into leprosy, which Asclepius cured by drug (φάρμακον).[131] The view that the god could change one disease into another was not unusual.[132] Moreover, equally commonly, patients and healers used notions such as drug (φάρμακον), disease (νόσημα), and purgation (κάθαρσις) and their cognates to denote prescriptions of both physicians and healing deities. This scene portrays Galen himself giving serious consideration to the patient's dream and to Asclepius's relevance and authority to interpret it.

Galen's patients were not looking for a clinical explanation of their ailments, which was true not only of Asclepius and his priests but also the physicians. The following story demonstrates that Galen did not try to challenge patients who held such views. He writes:

> καὶ οὐκ ὀλίγους ἡμεῖς ἀνθρώπους νοσοῦντας ὅσα ἔτη διὰ τὸ τῆς ψυχῆς ἦθος ὑγιεινοὺς ἀπεδείξαμεν, ἐπανορθωσάμενοι τὴν ἀμετρίαν τῶν κινήσεων. οὐ σμικρὸς δὲ τοῦ λόγου μάρτυς καὶ ὁ πάτριος ἡμῶν θεὸς Ἀσκληπιός, οὐκ ὀλίγας μὲν ᾠδάς τε γράφεσθαι καὶ μίμους γελοίων καὶ μέλη τινὰ ποιεῖν ἐπιτάξας, οἷς αἱ τοῦ θυμοειδοῦς κινήσεις σφοδρότεραι γενόμεναι θερμοτέραν τοῦ δέοντος ἀπειργάζοντο τὴν κρᾶσιν τοῦ σώματος, ἑτέροις δέ τισιν, οὐκ ὀλίγοις οὐδὲ τούτοις, κυνηγετεῖν καὶ ἱππάζεσθαι καὶ ὁπλομαχεῖν. εὐθὺς δὲ τούτοις διώρισε τό τε τῶν κυνηγεσίων εἶδος, οἷς τοῦτο προσέταξε, τό τε τῆς ὁπλίσεως, οἷς δι" ὅπλων ἐκέλευσε τὰ γυμνάσια ποιεῖσθαι. οὐ γὰρ μόνον ἐπεγείρειν αὐτῶν τὸ θυμοειδὲς ἐβουλήθη, ἄρρωστον ὑπάρχον, ἀλλὰ καὶ μέτρον ὡρίσατο τῇ τῶν γυμνασίων ἰδέᾳ.[133]
>
> And not a few men, however many years they were ill through the disposition of their souls, we have made healthy by correcting the disproportion of their emotions. No slight witness of that statement is our ancestral god Asclepius, who ordered not a few to have odes written as well as to compose comical mimes and certain songs (for the motion of their passions, having become more vehement, made the temperature of the body warmer than it should be); and for others, these not a few either, he ordered hunting and horse riding and exercising in arms; and at the same time he set a limit to the kind of hunting for those whom he prescribed this . . . For he not only desired to awake the passion of these men because it was weak but also defined measure by the form of exercises.

According to Galen, the majority of patients did not seek instruction in the art of medicine.[134] Unlike at the time of Hippocrates, most patients who were contemporary to Galen sought cure through divine medicine.[135] As evidence, Galen pointed out to his readers that there was no country or city without places where recovery was sought through divine medicine, mainly temples of Asclepius and Apollo.[136]

Galen argued that most patients, even when seeking the help of physicians, took no interest in their training but chose physicians whom they knew.[137] Galen continued by saying that "others [i.e., other patients] will think and agree in the end

that men who take up this art [i.e., medicine] may differ in merit, but they distinguish between them and examine their skill by things remote from and irrelevant to the practice of medicine."[138] Galen testified that whenever he provided a trustworthy prognosis, it gained him the moniker of "wonder-teller" and "wonder worker" by his Roman colleagues.[139] On one occasion, Galen was called a prophet (μάντις) after quickly diagnosing an ill boy.[140] Even intellectuals, like Galen's friend and supporter Boethus, expressed doubts as to where medical knowledge ended and prophecy began: ὁ Βοηθὸς ἔφη· κἀγὼ πρὸς ἐκείνους, ὡς οἶσθα, καλεῖν εἴωθά σε μάντιν ὄντα, ὅταν τοιοῦτον εἴπῃς, ὁποῖον οἱ ἀντίτεχνοί σου φάσκουσιν ἀδύνατον εἶναι, διὰ τῶν τῆς ἰατρικῆς θεωρημάτων γνωσθῆναι.[141] This example served to prove a point that Galen made earlier in his treatise on prognosis, namely, that when a physician was able to predict the future course of a patient's illness, he was dismissed as a sorcerer.[142] P. *Oxy.* 3078, an oracle question from the second to third centuries CE, is a further, near contemporary illustration of a patient's reluctance to commit to one type of healing. The subject of the question was an eye ailment of a type so common in Egypt that Hermes himself had produced a manual treatment. The person making the inquiry beseeched Hermes and Serapis to assist him by providing the cure to his doctor.[143] In a similar manner to the patients discussed by Galen, the author of the inscription sought cure from the god, but he also consulted a physician at the same time.

Aelius Aristides

To consider the patient experience in more depth, the remainder of the chapter focuses on the figure of Aelius Aristides.[144] Aristides' *Sacred Tales* is the most detailed testimony of the experiences of a patient and supplicant during the High Roman Empire known to us. Aristides was born in 117 CE in the rustic area of Mysia in Asia Minor into a prosperous family of no insignificant influence in local politics.[145] Aristides' father, Eudaimon, was already a Roman citizen, and Aristides must have gained a similar status by birth.[146] He benefited from the finest education the Greek world of Asia Minor could offer during the High Empire and studied under some of the most illustrious intellectuals of his age.[147] Aristides became ill for the first time during his explorations in Egypt when he was in his early twenties, but he apparently regained his health after returning to Smyrna.[148] Aristides was in the city of Rome, seeking the fame the city bequeathed to orators of extraordinary ability, when his health declined for the second time.[149] Having consulted local physicians, and even after returning to his native Smyrna, Aristides was offered no cure, prognosis, or even diagnosis. Soon afterward, while convalescing in the warm springs

near Pergamum, Aristides was invited by Asclepius, the god of medicine, to his nearby temple.[150]

The history of Aelius Aristides as a patient is accessible mainly through his autobiographical *Sacred Tales.*[151] The subject matter of this history includes Aristides' medical condition, his attempts to recuperate, and his thoughts about his physical condition. At times, the relevant testimonies of the *Sacred Tales* can be corroborated by Aristides' other works as well as by the works of later authors and some inscriptions.[152] Aristides composed the *Sacred Tales* in the early 170s,[153] when he was well over fifty; although no similar work is now available, the *Sacred Tales* can deservedly be included among other works of the so-called Second Sophistic. The *Sacred Tales,* similar to other testimonies, reflects the religious climate of its day.[154] As a *pepaideumenos,* Aristides also shared the habit of many of his contemporary Greek scholars and wrote in the archaic Attic Greek dialect.[155] The content of the *Sacred Tales,* however, is not generic. Rather, it is very personal and offers a rare view of the genuine experiences of a patient during the second century CE, his reactions to his maladies, his appeals for aid, and his interactions with his healers.

Episodes of severe illness had dominated the life of Aristides at least from his early twenties.[156] At the age of twenty-six, while in critical condition in the city of Rome, Aristides underwent a major surgery conducted by unnamed local physicians.[157] Failing to regain his health, Aristides went back to Smyrna, consulting a variety of health care providers along the way.[158] None of the authorities could understand the "complex nature of [his] disease."[159] In despair, Aristides headed to another famous healing center: the warm springs near Pergamum.[160] According to Aristides, there Asclepius revealed himself and summoned him to the temple in Pergamum. Aristides took the invitation and, as he later wrote, realized that to recover he must follow all of Asclepius's commands.[161] During his time in the Asclepieion, Aristides acted as was expected of a supplicant. He slept in the *abaton,* dreamt, and acted upon the prescriptions the god gave him.[162]

The overall picture that emerges from the *Sacred Tales* is one in which Aristides, as a sick person, was indiscriminate about the nature of the therapeutic authority of his human healers. In turn, his healers were careful not to mark themselves exclusively as either priests or physicians. In one instance at his family estates and suffering from an unbearable headache, a convulsion, and a fever, Aristides called for a physician but continued to follow the commands Asclepius sent him by dreams.[163] Having been cured, Aristides was ambiguous about whom he believed to have been his healer.[164] On another occasion, a consortium of physicians who were present in the Asclepieion and advised Aristides were forced to admit that the

course of treatment Asclepius prescribed to cure his tumor proved efficacious despite being clinically illogical.[165] In fact, the *Sacred Tales* often refers to the presence of physicians both inside and outside the Asclepieion. According to the *Sacred Tales,* Aristides commonly sought doctors' advice after Asclepius sent him a dream.[166] Aristides also claimed that physicians had a seminal role in the temple.[167] They helped supplicants to infer the divine message in their dreams and often provided medical supervision for the execution of the god's commands.[168] For example, Aristides told of a dream from Asclepius that was interpreted with the assistance of both temple wardens and a physician by the name of Theodotos.[169] On another occasion, the same Theodotos—remembering that Asclepius ordered Aristides to spend time on songs and lyric verse and maintain a chorus of boys—ordered the boys to sing some of his lyric verse because Aristides was having difficulty breathing. According to Aristides, he experienced comfort while the boys were singing.[170] As a physician, Theodotos was not simply reacting to the demands of Aristides; on at least one occasion, he approached Aristides with medically relevant information obtained by a dream. On this occasion, Theodotos thought that the dream of a certain Macedonian, whom the *Sacred Tales* describes as "one of his fellow pilgrims" (ἑνὶ τῶν συμφοιτητῶν), pertained directly to Aristides. The Macedonian dreamt that he sang a paean of Aristides in which there was the invocation "hail Paean, Heracles Asclepius" (Ἰὴ Παιὰν Ἥρακλες Ἀσκληπιέ).[171] Aristides then offered the paean in common to both gods.

A physician of far greater significance consulted Aristides during the incubation he was performing in the temple of the Saviors: the Pergamene physician Satyrus, who was also Galen's teacher and a possible source for the latter's diagnosis of Aelius Aristides. Satyrus visited Aristides on his sickbed in Pergamum.[172] The renowned doctor was critical of Aristides' habit of purging large quantities of blood and prescribed him a simple plaster for his abdomen. Aristides claimed he did not have the authority to quit the bloodletting, which was Asclepius's command, but he did use the plaster.[173] From Aristides' point of view, making a choice between following the regimen Satyrus prescribed and that which was recommended by Asclepius was simply not necessary.

The relationship between priests and physicians within the temple is a central theme in Aristides' depictions of life in the Asclepieion. In his decision to recuperate in the temple of Asclepius, Aristides showed his trust in Asclepius's healing power. In his recurrent consultations with the temple wardens regarding the contents of his dreams and the appropriate manner for understanding Asclepius's commands implicit within them, Aristides expressed his faith in the fashion by which

the cult was conducted. However, neither Aristides' choice to get better at the Asclepieion nor his trust in the temple wardens excluded the discipline of medicine or the authority of physicians.[174] Moreover, this dichotomy was never propagated by the staff of the Asclepieion itself; in fact, the temple warden Asclepiacos was also a physician. The evidence for Asclepiacos's dual role in the temple can be seen in Aristides' own description of him in the *Sacred Tales*.[175]

Epigraphic evidence shows that the picture Aristides painted of the Asclepieion, in which some of the priests were physicians, was neither fictitious nor unique to Pergamum. Inscriptions from the Athenian Asclepieion and from the city of Mytilene in Lesbos confirm that physicians and priests worked side by side and that at least some of the priests were, in fact, physicians.[176] *IG* II², no. 3798 is an inscription on a marble plaque, which dates from 98/9—103/4 CE and was found within the Athenian Asclepieion.[177] It is a dedication to one Σώζων Λαδίκου Σουνιεύς a *Zakaros* and physician who received an honorary statue upon completion of his tenure as *Zakaros*.[178] Nothing is known regarding the manner of selecting the *Zakaroi,* but their tenure lasted one year, and, during the imperial era, their duties must have included supervision of the daily functioning of the cult.[179] They acted as guardians of the temple and were probably responsible for the daily sacrifices as well as for the temple's maintenance. From the first century CE onward, the evidence suggests that the *Zakaroi* were Athenian citizens, often men of means and of a relatively high social status. Two of the *Zakaroi* from the first two centuries CE who are known to us were also physicians (Σώζων Σοθωιεύς and Ἄσυλος Στειρθεύς).[180] Aleshire assumed that in light of the daily tasks undertaken by the *Zakaroi,* a certain preference may have been given to citizens of the city who were physicians and willing to undertake the magistracy.[181] In addition, between the years 125 and 175 CE in the city of Mytilene in Lesbos, an honorific decree was dedicated to Bressos, son of Bressos, by the council and the people. Bressos was an *archiatros* and was exempt from liturgies, a privilege his children and grandchildren were also entitled to. In addition to other public posts, Bressos had been in charge of the κισσοφορία and the ἀγρονομία, held the office of βούλαρχος and the νομοφύλαξ, and was also ζάκορον Σαώτηρος Ἀσκληπίω.[182]

Aristides' testimony highlights the popularity of the cult of Asclepius during the High Roman Empire, particularly among the sick, and it demonstrates how the Asclepieia became medical centers. As such, it was only natural that doctors should have also conglomerated in the vicinity of the temples of Asclepius. In cities like Athens, Pergamum, Epidaurus, and Rome, the attraction for physicians was twofold: the presence of an Asclepieion and the appeal of a large city with an active

cultural life. However, the appointment of physicians as *Zakaroi* suggests that the governing institutions themselves recognized the need for a physician within the Asclepieion and, more importantly, assumed that there was no contradiction between his activities in the capacity of priest and that of doctor. The harmonious relations between priests and doctors and between temple medicine and scientific healing are unmistakably reflected in Aristides' narrative.

Conclusion

The historiography of medicine in classical antiquity, particularly as seen from the broader perspective of intellectual history or the history of ideas, has often been incorporated into the narrative of the birth of rational thinking and science and their divorce from traditional, religious, and superstitious conceptions. Ever since the appearance of the first treatises of the Hippocratic corpus—through the golden age of scientific medicine in Hellenistic Alexandria and up to the works of the great medical authors of the Roman era, such as Celsus, Rufus of Ephesus, and Galen—physicians seem to have positioned their discipline as an alternative to traditional methods of healing, superstitious therapeutics, and temple medicine. However, changing the focus from the supply of medical care to the demand for it shows not only that patients throughout classical antiquity were reluctant to forsake religiously guided therapeutic measures but also that the practice of health care was essentially unaware of such a dichotomy. Inscriptions regularly ascribed an act of healing to a joint effort between physicians and gods. Patients were habitually indiscriminative between the therapeutic methods that physicians and gods could offer. Instead of attributing this tendency to the formulaic nature of votive offerings, which was largely shaped by the economy of inscription writing, the lack of distinction should be seen as representative of the dedicator's state of mind. Aristides' *Sacred Tales,* the sole first-person prose narrative of a sick person to survive from classical antiquity, reinforces this interpretation. Aristides never discussed any causal or mechanistic relationship either between disease and (its) symptoms or between medical procedures and recuperation, his behavior indicated no dichotomy between scientific medicine and temple medicine, his choice of health care provider was not conducted on the basis of method, and the *Sacred Tales* disclose no knowledge of anatomy. Moreover, Aristides' experiences were not unique. The short testimony of P. Aelius Theon indicates that Asclepius prescribed the same remedies as physicians did.

From the emergence of the cult of Asclepius in the fifth century BCE, therefore, the therapeutic measures Asclepius prescribed his sick devotees bore a great

resemblance to those prescribed by physicians outside the temple (e.g., at home, in bathhouses or spas, or within the Roman army),[183] which, in turn, suggests ambiguity in the boundaries between temple healing and lay medicine throughout classical antiquity.[184] Physicians' comments concerning the nature of dreams and their relevance to medical care (along with their inclination not to discredit temple medicine) allowed patients to understand their dreams as god-sent as well as somatic. According to Galen, patients were seldom concerned with the rationale of their treatment, and his colleagues were inclined to allow patients to understand their prescriptions in religious terms. In consequence, patients rarely saw any disciplinary division between physicians and other types of health care providers. Indeed, the examination of patients' testimonies revealed that the sick were influenced both by the emergence of Hippocratic medicine and its aftermath and by the widespread cult of Asclepius in their choice of words when depicting their ailments and when choosing a health care provider and where to convalesce. However, there is no evidence that they perceived the help or technique gods and physicians could offer as mutually exclusive. Moreover, the expectations of the sick were similar when addressing a physician or when supplicating oneself to a deity.

The temple's centrality as an arena of health care, and one in which both priests and physicians were seen as authoritative figures, was influential in shaping the Greco-Roman health care system. In the temple, priests and physicians habitually operated with no clear distinction between them. Sometimes, both sources of authority were embodied in the same person, as in the case of Asclepiacos, the temple warden at Pergamum. Numerous cities had an Asclepieion within them. Both those seeking care (namely, those willing to pay for it) and those providing care (namely, those making a living out of it) flocked to them.[185] In this respect, the large number of dedications of medical instruments to the Asclepieia might have more practical implications. Even if the dedicated objects were not in use, they were on display and could serve as teaching aids.[186] Within this system, physicians and priests used a similar professional language. In fact, there is a "striking collaboration between priest and doctor, and a remarkable lack of polemic between the two."[187]

An archaeological study (in a Foucauldian sense) of medical knowledge in the Roman world and its phenomenology (the way objects, images, ideas, and emotions appear or are present in consciousness) reveals much common ground between medical and religious thought.[188] In his *Birth of the Clinic* and *Archaeology of Knowledge,* Foucault allowed us to see that medicine is not simply a mechanical practice but also a language that has evolved over time. Foucault's notion of archae-

ology (the uncovering of the knowledge grid that organizes every scientific discourse and defines what can and what cannot be thought scientifically) is paramount to an understanding of the experiences of the sick in a given society, and it makes their experiences accessible through an analysis of their language and practice. Medical discourses in general organize themselves in relation to certain political, social, cultural, and economic structures and to each other.[189] A particular arrangement of a medical discourse affects the way things are seen and are spoken of and draws the borderline between what belongs to the medical discourse and what does not. Medicine simply reorganizes illness as a disease according to a new pattern of syntax.[190] Our modern perception of the body as the natural space of the origin and distribution of disease, a space determined by the anatomical atlas, is merely one of the various ways in which medicine can operate. Unlike in modern times, a seminal characteristic of the practice of medicine in classical antiquity was a sharp division between power and authority embodied in the person of the healer. Authority was based on knowledge and titles, which were concentrated in the hands of practitioners. Power, on the other hand, was left to the patients, who chose whose advice to follow but, even more importantly, the rationale on which it was based. To consider the interactions between patients and their healers more fully, this study now turns to some of the particular locales in which health care was provided.

The *Domus* and Reproduction

Birth in the ancient world is generally assumed to have been an all-female event with male physicians only being present at times of emergency. Historians have increasingly shown, however, that the picture was somewhat more complex. Lesley Dean-Jones has argued that the Hippocratic corpus was silent on normal birth, not because male physicians were unacquainted with it. Rather, the Hippocratics did not deem such births worth recording because they were so routine.[1] Ann Hanson has also demonstrated the Hippocratic involvement in normal birth with reference to the case histories in the *Epidemics,* which give information about birth or the events immediately after it.[2] In fact, about one-third of the patients who appear in the seven books of Hippocrates' *Epidemics* were women. Many of them had fallen ill after childbirth or miscarriage, which suggests Hippocratic physicians' keen interest in childbirth and postnatal care.[3] Galen also treated women, and there are twenty-five stories of female patients in his work.[4] Further challenging the idea that childbirth was the preserve of the midwives and other illnesses solely the responsibility of physicians, Helen King has posited that the natural response of many laypeople in the early Roman Empire was to go to midwives for all disorders of the womb, the menstrual function, and the breasts.[5]

This study of the *loci* in which health care was sought, offered, and undertaken begins by looking into the practice of childbirth and the *domus* as the arena in which it occurred. Childbirth, which took place at home, was by far the most common event in which medical authority was consulted. An analysis of childbirth can therefore shed light more broadly on the ways in which medical authority was sought and consulted and through which notions of health were embedded and taught. This chapter considers the health-related aspects of childbirth, how it was comprehended, and the identity of those who were seen as authoritative in ex-

plaining its nature and offering advice and assistance within the wider context of the Greco-Roman health care system. The first section offers a survey of some of the classical medical writings on women, making a few observations on genre, authorship, and theme. The next section examines the evidence concerning the identity and role of midwives, female doctors, and male doctors in the context of childbirth. The following section concerns the mothers' perspective. Because of the paucity of the surviving evidence, the actions of mothers are used to infer their comprehension of the physiology of childbirth and the help they thought they needed. These three parts together are then used to demonstrate that childbirth in the Roman world was understood to be an event with medical implications. A critical assessment of attitudes toward childbirth—where it took place, who was considered capable to assist, and the roles attributed to the various figures involved—reveals similar patterns to those found in other health-related activities in various arenas in Roman times. I use this analysis of childbirth to suggest that the *domus* in fact acted as a microcosm of the medical market place. It reveals the power relations between patients and practitioners; a mixture of religious and scientific approaches; and how basic notions regarding health, illness, and health care were being canonized.

Childbirth

Reproduction was an important subject for Greco-Roman medical writers, and there are many ancient medical texts devoted to women. Included within the Hippocratic corpus are the treatises *Disease of Women, On the Nature of Women, On Sterile Women, On Superfoetation,* and *On the Disease of Young Girls.* The fourth-century BCE physician Diocles of Carystus composed a treatise on gynecology (Γυναικεία) as did Cleophantus, the brother of Erasistratus. Herophilus did not dedicate a treatise to gynecology, but he did write on midwifery (Μαιωτικόν).[6] Around the beginning of the imperial era, the Herophilean Alexander Philalethes also composed a treatise on gynecology. During the second century CE, Soranus wrote a book bearing this title, which is the only one of its kind to survive to this day. Philumenus possibly wrote a work on gynecology in the second or third century, which, together with a Latin translation of Soranus's work suggests that this topic was studied and read well into late antiquity.[7] This vast production of medical treatises on gynecology and childbirth proves that ever since the emergence of Hippocratic medicine, physicians took a keen interest in this subject. Moreover, the content of these works confirms that male physicians actually had firsthand knowledge and experience of delivering babies.

Among the Latin authors, the main focus was not on the female constitution in general but on issues concerning reproduction. This difference in perspective derived from the identity and interest of the authors themselves. Medicine as a profession and as a discipline originated in the Greek world. Although its influence had been strongly felt in the Roman world since the second half of the third century BCE, the medical discourse continued to take place in Greek.[8] Authors of Roman identity who composed their works in Latin were not professional physicians. Their concern with medicine was part of a wider interest in the natural world, and their medical experience was limited, usually deriving from their role as *paterfamilias*.[9] In the context of childbirth, however, the testimonies of Roman authors writing in Latin attest that male assistance during childbirth was commonplace in the Roman tradition, too, and that childbirth took place at home.

The works of Greek authors demonstrate that childbirth was of major interest to male physicians; that they were often involved in the process of birth, particularly when the delivery proved difficult; and that birth itself habitually took place at home and involved all members of the household. Soranus's elaborate catalogue of his predecessors' views concerning difficult childbirth in his fourth and final book on gynecology shows the increasing sophistication with which it was discussed by doctors in the centuries following the Hippocratics.[10] It also proves that the *domus* was an important medical arena, where ideas were formulated and where basic notions concerning the nature of mankind were being shaped and taught to all involved. On the evidence now available, all authors writing on medical matters followed the Hippocratic tradition of Hippoc. *Mul.* 1.62, which explained that physicians must take gender differences into consideration when treating patients. Such an emphasis presumed certain variations of constitution and the more general Hippocratic premise that a woman's health depended upon her reproductive activity—fulfilling her social role would make her healthy.[11] This view of women's health and their role in society was also commonplace in Rome. Procreation was the explicit aim of Roman marriage.[12] Most women married young, probably in their late teens.[13] The importance and dangers of early childbearing were reflected in the considerable attention given to them in the relevant professional literature concerning pregnancy and early childhood.[14]

Indeed, Latin authors such as Pliny, Dioscorides, and Celsus were also interested in and wrote about female fertility.[15] Pliny and Dioscorides discussed various materials for easing and speeding the actual birth process.[16] Interestingly, both authors also offered amulets for these purposes. Pliny recorded more complex procedures as well, such as successfully concluding a complicated delivery by throwing a light

cavalry spear that had been pulled out of a human body without touching the ground over the house in which the delivery occurred. In addition, Pliny mentioned some postdelivery purging rites and pharmacological advice for halting, increasing, and improving lactation.[17] Significantly, Celsus, Dioscorides, and Pliny were not scientists. Their works reflect common habits, practices, and beliefs. Their writings provide firm evidence that the *domus* was an arena of the medical market place, where medical advice was sought and provided. Moreover, as in other medical arenas, their testimonies show no sign of a dichotomy between religious approaches toward bodily procedures and scientific ones.

Most Latin authors writing on the female reproductive system were also aware of the social and legal considerations attached to childbirth. The subject of abortion received particular attention. Scribonius, to name but one example, was aware of the prohibition included in the *Hippocratic Oath* for physicians to carry out abortions.[18] However, the debates on this issue nonetheless indicate that preservation of the mother's life was prioritized over that of the fetus.[19] The only exception was Pliny, who saw an abortion to be a cruel reminder of nature and of the control of a woman over the future life of a man.[20] The Roman attitude toward abortion in general was negative only when seen as a woman's means to obstruct a man's acquisition of legitimate heirs and instead pursue her own priorities, the worst of which were adultery and vanity. This Roman view was formalized in a rescript of Severus and Caracalla that made it a punishable offense for a woman to abort without the consent of the man whose heir this child might have become.[21] Other laws condemned those who provided abortifacients or love potions and even drugs for conception that killed the recipient.[22] But there are also indications that abortion, both natural and induced, was part of the physician's professional jurisdiction in Rome. Celsus provided two recipes for abortion and instructions for removing a dead fetus surgically.[23]

As part of a more general medical discourse, discussions of gynecology and childbirth reflected other political, social, cultural, and economic structures. Like any particular arrangement of a medical discourse, the one that prevailed during the High Roman Empire affected the way things were seen and spoken. It also distinguished between what belonged to the medical discourse and what did not. In turn, an analysis of the discussion of childbirth during the High Roman Empire reveals more than contemporary anatomical understandings and the quality of the health services available: it holds vital clues concerning popular morality; the power relations within the household; family life; and the level of intervention of external authorities into the domestic arena.

Almost all of the authors who wrote on gynecology and childbirth addressed its practical aspects and acknowledged the major role played by midwives. In Greek mythology, Athena acted as midwife to Leto and later taught Artemis, the goddess of childbirth, the art of midwifery.[24] Socrates, who claimed to be a midwife's son, described the midwife (*maia*) as an elderly woman who used charms and chants as well as drugs in order to induce labor and ensure a successful birth.[25] Hyginus told the story of Agnodike, who, by masquerading as a man, was able to study under Herophilus and then founded the art of midwifery.[26] Though rarely mentioned in the Hippocratic corpus, perhaps because the Hippocratic physician concerned himself solely with the abnormal, there are scattered mentions of women helpers and cord cutters.[27] According to Pliny, certain midwives also composed professional treatises, which circulated widely.[28] Galen dedicated *On the Anatomy of the Uterus* to a midwife, and he described the midwives who consulted the wife of Boethus as being "the best in Rome."[29] Thus, midwifery was a widespread phenomenon, one that was closely connected with medicine. As an agent of a discipline, the midwife resembled the Greco-Roman physician, in that her authority was not founded on an official certificate issued or regulated by the state. Rather, midwives had to rely on other mechanisms to vouch for their dexterity and prowess.

By far the most detailed and influential discussion of midwifery in any classical medical text is that of the renowned first-century CE physician Soranus of Ephesus. He opened his treatise on gynecology with a division of his subject matter into two parts: the first being the midwife and the second being the situations that the midwife faced.[30] Soranus then carried his division one step further by including a section on the prospective midwife, in which he examined the nature of the persons fit to become midwives, and a section on those who were already practicing, in which he discussed the attributes of the best midwife.[31] That an important physician like Soranus composed such a treatise indicates the interest physicians took in all aspects of childbirth: both theoretical and practical. It also reveals the power relations within the field of health care. It was a male physician of an intellectual character who took it upon himself to write a treatise that guided practitioners and other readers how to become a midwife and how to evaluate one. However, the wide circulation of this work, alongside a late-antiquity Latin translation, proves that Soranus reflected general trends.

According to Soranus, women fit to become midwives needed to be of good memory, work-loving, respectable, not unduly handicapped as regarded their senses, sound of limb, robust, and (according to some people) endowed with long slim fingers and short fingernails. They had to be literate, in order to comprehend

the art through theory, and have their wits about them, so that they could easily follow what was said and what was happening. They ought to have a good memory in order to retain any imparted instructions. They had to be respectable, because people had to trust them with their households and their secrets. Of course, they had to be well disciplined, always be sober, and have a quiet disposition. A midwife should not be greedy for money, lest she might, wickedly, perform an abortion for payment. She also needed to be free from superstition (ἀδεισιδαίμονα χάριν) so as not to overlook salutary measures on account of a dream omen, custom, or vulgar superstition. This set of skills, Soranus explained, could be acquired through zealous endeavor and practice in her work. In a society in which no medical or any other professional schools or a mechanism of state regulation in the form of a licensing system existed, apprenticeship was the most common route to a professional career.[32] Soranus, so it seems, saw a similarity between midwives and physicians, when it came to both their *Bildung* and the evaluation of their skills.

The marks of a good midwife were important to Soranus for several reasons: first, so that the best could recognize themselves as such; second, so that beginners could look up to them as models of good practice; and third, so that in times of need the public could know whom to summon. Soranus distinguished between a faultless midwife, who merely executed her medical tasks perfectly, and the best midwife, who, in addition to the successful management of cases, was well versed in theory. Furthermore, the perfect midwife was trained in all branches of therapy (πᾶσι τοῖς μέρεσιν τῆς θεραππείας), insofar as some cases needed to be treated with diet, others with surgery, and yet others with drugs. In short, she should not follow the Dogmatist or Empiricist school but rather belong to the Methodist school. Some of these requirements, such as theoretical knowledge, were probably postulated by the academic mind of Soranus and his prospective readership. Others, such as discretion and honesty, were likely to reflect the demands of actual clients. Unlike some medical treatises, Soranus's essay on gynecology is not irrelevant to the social historian. It reveals the context in which gynecological discourse was rooted; it sheds light on the informal institutions, set by society, that instructed those who needed help in choosing a qualified practitioner; it highlights the ethical considerations that were related to the practice of midwifery; and it uncovers the power relations between male physicians and female midwives.

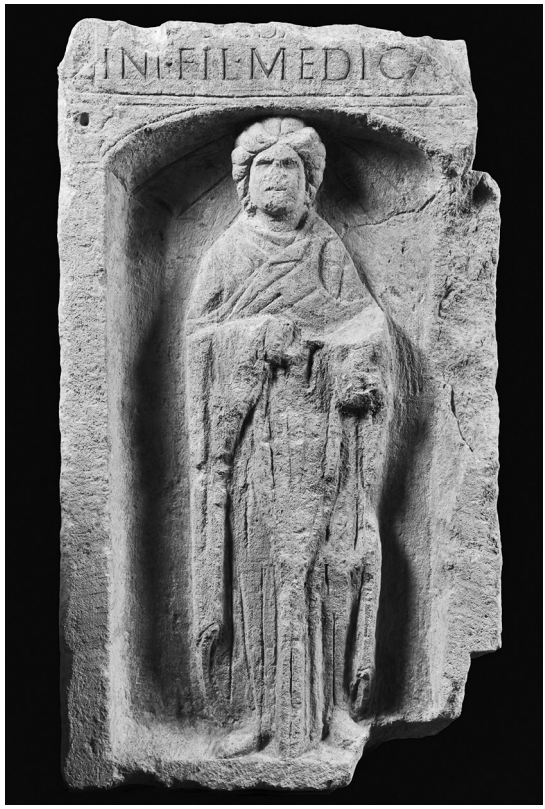
The second book of Soranus's *Gynecology* concerned the birth itself and its immediate aftermath. The book covered many aspects of childbearing in the upper classes of Roman society. His work suggests that the birth itself was the domain of the *maia,* along with her female assistants, and does not indicate that a male

physician would be present.[33] The *maia* was responsible for forming a report concerning the physical strength of the newborn. This report would have most likely played a prominent role in any further decision making about the child's future by the man in whose *potestas* the child would be.[34] It was customary for the Roman father to mark his intention to rear the child by lifting the newborn from the ground (*tollere, suscipere*).[35] The midwife's role in preparing this report was also a recognition by the Roman legislator of her medical authority. The next important decision, according to Soranus, was the selection of the wet nurse,[36] which, however, was as much the decision of the mother as of the *maia,* because it was the mother's choice whether to breastfeed or not.[37] Thus, the midwife's official tasks, namely, the medical supervision of the childbirth and the physical examination of the newborn, were seen as part of her professional jurisdiction. However, the exact scope of this jurisdiction was often shaped by nonmedical requirements, mainly the social construction of the Roman family, the role of the *paterfamilias,* and cultural preferences in relation to childrearing.

As the most detailed discussion of midwifery available, Soranus's work must have had significant influence. Nonetheless, there is no reason to believe that the ideal midwife Soranus championed was at any time a common figure. Soranus, like all the authors mentioned above, was an intellectual male with an upper-class background and extensive education. To a large extent, his work reflects his own persona and those of his prospective readership. In Greek medical literature and in the works of Latin authors such as Pliny and Celsus, however, the image of the midwife was easily recognizable by her title, skills, and expertise and by the services she was expected to provide. Therefore, the midwife was an important figure in the Greco-Roman world, and she was recognized as an authority in her field.

Physicians and Midwives

Men and women who were seen as authorities in offering aid during childbirth mainly consisted of physicians and midwives, respectively. The evidence also suggests that female physicians existed, whose clients were either solely or mainly other women.[38] Furthermore, the repeated comments made by male physicians that women doctors were more suited for treating gynecological matters suggests that the better part of female physicians' professional practice had to do with women who approached them on such affairs. In addition, the testimonies of medical treatises attributed to women authors prove that the contribution of women physicians was not restricted to gendered medicine but extended to general therapeutics.[39] Most of the evidence concerning women physicians, much like their male coun-



Tombstone of a woman doctor (*medica*) from Metz. Probably first century CE. © Laurianne Kieffer—Musée de La Cour d'Or Metz Métropole.

terparts, arrives from inscriptions on tombstones, which means that the vocational component of their persona was similarly important. Sadly, such inscriptions are notoriously scarce regarding the deceased physicians' training and social stature. However, at least one undisputed example exists of a female physician who was honored by her native city for medical services rendered to the general public, Antiochis of Tlos.

The council and the people of Tlos commended Antiochis, daughter of Diodotus, for her experience in the art of medicine and erected a statue in her likeness.[40] Her father was most likely the same person cited by Galen for his cures for diseases of the spleen, dropsy, sciatica, and arthritis.[41] Dioscorides also cited Diodotus as an authority in the field of pharmacology.[42] Thus, Antiochis shared two common

features of physicians in general: belonging to a medical family and acquiring her professional training as an apprentice to a more senior doctor.[43] Indeed, having received her medical training within her family, which was the most common fashion for becoming a physician in the Greco-Roman world, suggests that Antiochis received a similar medical training as that given to men in similar circumstances.[44] Furthermore, Parker was probably right in arguing that the council's decision to bestow honors upon her proves that Antiochis's practice extended beyond midwifery[45] and that her medical services were publicly recognized. Nonetheless, Antiochis's clientele would have been predominantly female. The lack of an indication of Antiochis's field of expertise and the tendency of women doctors to treat women exclusively, particularly with gynecological issues, suggests that, unlike in medical writings, the social distinction between female doctors and midwives was not always clear.

Antiochis was not the only woman physician who treated patients as a free person and was honored for her services by the community. Aurelia Alexandria Zosime, Auguste, and Domnina were all citywide practitioners who were commended for their services.[46] The case of Pantheia of Pergamum, whose loving husband (who was himself a physician) recorded her memory, strengthens the case that a similar meaning was attributed to the title of "physician" for men and women.[47] A woman named Gemina was called a savior to all through her knowledge of medicine.[48] Iulia Saturnina was commemorated as "the best doctor" (*medicae optimae*).[49] Similarly, Metilia Donata, a female physician from Lugdunum, Gallia Lugdunensis, may have been a physician, insofar as the decurions gave her a burial place by decree:

> Metilia Donata medic[a] / de sua pecunia dedi[t] / l(oco) d(ato) d(ecreto) d(ecurionum).[50]
>
> Metilia Donata, physician, gave (this) from her own money, the place having been given by decree of the decurions.

The case of Metilia Donata shows that at least some women physicians were of means and that their contribution to the community was noteworthy. Otherwise, it is unlikely that the decurions would have decreed that a place of burial be allocated to her, or that she herself would have had the means to build a monument. The widespread tendency in the Greco-Roman world to commemorate individuals using inscriptions reveals the grounds for the public bestowal of honor. In addition, funerary inscriptions show how identity was constructed. In-

scriptions on tombstones memorializing female doctors indicate that this was an honorable vocation and an important component of their identity.

The vocabulary and the pictorial language with which these women were commemorated is revealing of their practice. One relevant tombstone states, "Here lies Phanostrate, a midwife and a physician": μαῖα καὶ ἰατρὸς Φανοστράτη ἐνθάδε κεῖται.[51] Not surprisingly, this inscription has often been used in the scholarly debate on the meaning of the Greek term μαῖα and its relation to the term ἰατρὸς both by historians who have argued that the two are synonymous and by those who have objected to this view.[52] A tombstone from Rome of a *medica* named Iulia Saturnina shows an infant in swaddling bands, thus alluding either to child care or to midwifery.[53] The methods and physical settings of childbirth are also portrayed on a number of reliefs.[54] One, over the entrance to the tomb at Isola Sacra, near Ostia, portrays a midwife at work.[55] She sits on a low stool in front of the parturient, who sits naked on a higher chair with solid armrests, which appear to have gripping handles built into them. Other sources portray a crescent-shaped opening in the seat of the chair, through which the midwife could pull out the newborn baby. Behind the parturient is a female assistant, whose arms support the upper body of the woman giving birth.[56] Significantly, the monument, a terracotta relief of rough workmanship, was set to commemorate the lower-class midwife rather than the presumably loftier parturient.[57]

The Roman jurist Johannes, in his discussion of inheritance laws, mentioned physicians of both sexes and included female slaves who were doctors or midwives as having similar value.[58] Therefore, women could have been physicians and, when referred to as such, the title of "physician" described a similar professional conduct and set of skills as that of a male physician. Moreover, the resemblance between midwives and women physicians proves that midwives were expected to master a discipline that was either medicine or a branch of medicine.[59] Insofar as the role of the midwife often extended beyond the delivery itself and covered both postnatal and antenatal care, as well as general attendance with any issues having to do with women's health, discerning where the role of the midwife ended and that of the physician began, and vice versa, is impossible. Furthermore, much like male physicians, midwives' professional authority was based upon visible expertise, without the support of a licensing system.

The Roman legislator frequently acknowledged this relationship between medicine and midwifery. The third-century CE Roman jurist Ulpian confirmed that the fees of specialists and obstetricians, "who seem to practice any kind of *medicina*," came under the jurisdiction of the governor on the same basis as those of the

medici.[60] This statement was merely expressing in legal terms ideas already found in the works of physicians, namely, that midwifery and gynecology were branches of medicine. Nor was Ulpian concerning himself with a rare phenomenon. The existence of female physicians is widely attested to in the epigraphic findings. Although most inscriptions do not mention the field of expertise of the *medicae,* most plausibly, the majority of their practice revolved around women patients and gynecological matters.[61] Furthermore, the widespread nature of professional intervention in the process of childbirth implies the canonization of the notions and practices that governed childbirth during the Roman era. The presence of an easily recognized professional authority in the *domus* during the birth process must have served as a powerful agent of medical knowledge to all the household members.

An illuminating example is provided by an inscription from Rome, dated back to the first or second century CE, which records an unnamed freedwoman of Caesar who was an attendant to the imperial food supply and a physician of the imperial household.

> [Dis] Manibus / [Crescen]ti a frumento / [ministratorum Aug(usti) / [Anonyma] Caesaris medica / [ex familia c]asterni coiugi / [optimo f]ecit et sibi posterique suis.[62]
>
> To the divine spirits of [Crescen]tius, attendant on the imperial food supply, [Anonyma], (freedwoman) of Caesar, physician of the imperial household, made (this) for her excellent husband and herself and their descendants.

Like male physicians, midwives were commonly employed in Roman private houses to look after the slaves and the *domini*. This unnamed female physician was most likely performing services within the imperial household, namely, attending to the female slaves and freedwomen. As such, she was marked as the authoritative agent of medical care within the household and was therefore responsible for shaping the household members' notions regarding health, illness, and treatment. Though nothing is known about her training or expertise, the inscription attests to the presence of a professional medical authority within the household and that she was recognized as such. Having a female doctor among the household staff can thus be used as evidence that the *domus* was a place in which health care was regularly provided.

Galen, who spoke of *iatrinai* being consulted in cases of hysteria and for examining the uterus, associated women physicians with female disorders but was care-

ful to include them in the realm of medicine.[63] In four cases in the treatise *On Prognosis,* Galen discussed a female patient who was being treated by one or more midwives (μαῖα, μαιευτρία). In three of these cases Galen played an active role. As Mattern has rightfully pointed out, the small number of these cases makes a generalization hazardous.[64] In all these cases, however, Galen competed with the midwives differently than he competed with other male physicians. None of the midwives is proved wrong in her diagnosis or therapy. In one story, the attending midwife offers the correct therapy, while Galen competed with other male physicians.[65] In the case of Boethus's wife, Galen trusted the professional authority of the head midwife, who offered the right therapy.[66] In yet another case, in which Galen had no active role, the patient was cured following the diagnosis of the midwife.[67] The exception is a case in which both the midwife and another male physician offered an erroneous diagnosis and course of action while Galen offered the correct one.[68]

The existence of women physicians was a necessity precipitated both by physicians themselves and by the imperatives of popular morality. Women's diseases were already seen in Hippocratic times as being substantially different from men's diseases. Although male physicians could form a diagnosis of a woman's illness, gynecology and obstetrics were generally perceived as a province in which specialists were required and in which women had the advantage.[69] Soranus reported that "the public is wont to call in midwives in cases of sickness when the women suffer something peculiar which they do not have in common with men."[70] In reality, a woman needing gynecological assistance was usually attended by another woman. This pattern must have received men's approval, because when a woman needed medical care, a man (husband, father, etc.) would have made the decision about engaging which professionals to attend to her.[71] For example, Seneca reported a case of a father hurrying to get a midwife for his daughter, who was soon to give birth.[72]

The preference for a female physician in cases of a female patient was also a matter of decorum. According to Galen, even if a male physician was present during labor, he was expected to leave the actual practical work to the midwife, asking her only what stage labor had reached.[73] Galen provided no medical reason for the male physician's absence from the room. The reader, so it seems, was expected to understand that the mother's honor was being protected. In normal circumstances, the midwife would also supervise the pregnancy and parturition, deal with gynecological disorders, and even undertake surgery.[74] Although women in labor were usually attended by other women, a role did exist for male physicians. Those who

were in the habit of turning to doctors were generally also inclined to summon male physicians when a mother was in labor. Even if this male physician was not usually present in the room where childbirth took place, his presence in the *domus* was considered beneficial.[75] Furthermore, the ease with which Hippocratic physicians intervened in cases of dystocia suggests that women as well as men considered men's intervention an appropriate expression of the entire household's concern when delivery proved difficult.[76]

That home was the usual setting for birth, and that birth would be presided over by women, was acknowledged by Roman legislators, as can be seen by the precautions Roman law took when a widow claimed to be pregnant by her deceased husband.[77] Such a claim had various practical bearings pertaining to laws of inheritance and succession; therefore, it was subject to serious legal discussion. The magistrate overseeing the case was to appoint a woman of excellent reputation in whose house the woman would give birth. When the woman went into labor, she was required to notify all the interested parties or their procurators so that they could send people to be present at the birth. Up to five freeborn women could be sent, as well as two midwives. The edict, probably with the well-being of the mother and the newborn in mind, explicitly stated that no more than ten freeborn women could be present in total. Significantly, in cases of uncertain pregnancy, the midwives were selected by the urban praetor rather than the parties themselves.[78] Such a demand implies a certain level of state regulation of midwifery, at least where the identity of its practitioners was concerned. Due process required that the widow had to invite the interested parties or their representatives at least thirty days before her delivery, which implies either common knowledge about the stages of pregnancy or that the prospective mother was guided by a professional during her prenatal period. The family of the deceased husband was then given permission to send three women of free status to keep watch at the entrance of her room. The newborn then had to be shown to all the interested parties for inspection. This procedure presumed that birth took place at home, with other women assisting and supervising. It presumed that no male physician would be present and that unspecified women had all the knowledge required to guide childbirth to a successful conclusion.

After asserting that midwifery was a branch of medicine and that its practitioners merited the legal status of all other physicians, Ulpian confirmed that a child taken out of his mother's womb surgically was a legitimate heir.[79] Ulpian understood by "birth" even a case in which the son was said to have been removed by the cutting of his mother (*si exsecto ventre editus sit*). The existence of such a re-

script confirms that it was not merely an ethical or theoretical question, but one with which Roman courts actually dealt. This rescript confirms that midwives were expected to be able to assist delivery using surgical means and that such procedures often enough ended with a living baby.[80] Roman law also acknowledged the future inheritance rights of a child while still in his mother's womb by providing explicitly for posthumous children.[81] In addition, the legal sources verify that at least some of Soranus's recommendations regarding the form of the delivery room were deemed necessary in the eyes of the Roman law.[82] Indeed, Soranus's pronouncement that one midwife and three women helpers should be present during birth suggests a moral requirement of modesty rather than of medical need.[83] In addition, Roman law entrusted midwives with the important duty of establishing pregnancy and the heavy moral duty of accurately reporting what happened in the delivery room.[84] We know from Paul's *Sententiae* that severe penalties resulted for smuggling in supposititious babies.[85] All these comments of the Roman legislator confirm that midwifery was a commonly practiced profession, that it was a branch of medicine, and that the level of expertise of the average midwife was quite remarkable. They also confirm the importance of the *domus* as a place where medical procedures were undertaken and where professional health care services were used. Moreover, the midwife's legal responsibility to report relevant details presumes an agreed-upon set of notions that made such reporting useful.

After the delivery, child care within the Roman household was the responsibility of women. New mothers relied on other women for guidance, advice, and services. Gellius told of a mother who was present at the difficult delivery of her daughter's baby and who was in charge of getting wet nurses as soon as possible.[86] This responsibility extended beyond the sphere of pregnancy and childbirth to include the care of a sick child and the diagnosis of illness. Margaret Pelling has shown how health care, like child care, seems perennially to have been a female responsibility.[87] In Roman society, women were usually the first port of call for the unwell.[88] However, childrearing could not have disregarded the principles taught by the physician or the midwife who supervised the birth. On the contrary, the summoning of a professional affirms confidence in both the discipline and the persona of the health care provider. Likely, the teachings of the physician or the midwife later guided the mother in rearing her children. Moreover, even when a person of medical authority was consulted, it could not have happened without preliminary diagnosis and treatment by the mother, a wet nurse, or another woman within the household. More specifically, the rearing of children in Roman times often relied on professional assistance. In Tacitus, upper-class Roman matrons often delegated

breastfeeding to slave wet nurses.[89] It could be inferred from Tacitus's account that alongside this task other duties, such as the basic attendance to the child's health, were also delegated. Wet-nursing itself was a matter of medical relevance. Soranus advised that the best woman, who was not necessarily the mother, be chosen for feeding the child, although he preferred the mother.[90] Soranus's criteria of a good or bad wet nurse concerned medical knowledge and expertise.[91]

Taken together, the accounts of medical and other authors, legal sources, and funerary inscriptions and monuments employed in this chapter have shown how physicians and midwives operated within a strict social framework, where gender conventions determined the behavior of all those involved. The discussion has also shown how the *domus* was turned into an arena of the medical market place during childbirth. First, a health care provider was sought, chosen from among a range of practitioners. Once found, he or she used professional authority to direct the course of events. As a consequence of the involvement of medical experts, the household members were also being educated, and medical knowledge was disseminated.

Mothers' Experiences

Although evidence concerning mothers' comprehension of the physiology of childbirth and of the methodology used by the various health care providers is scarce, what does exist depicts a similar picture to that found in other branches of medical care. No clear division between science and religion was drawn. For example, Soranus ridiculed midwives who refused to cut the umbilical cord with an iron tool, thinking it was unlucky.[92] Another common characteristic of the consumption of health-related services was the lack of a monopoly by certain disciplines and their agents over the field of health care. Pliny's comments that certain pieces of gynecological advice were given not merely by midwives but also by prostitutes are a case in point.[93] Though Pliny was often misogynistic, this observation should not necessarily be taken as derogative or dismissive. Throughout history, seeking gynecological advice from prostitutes, particularly concerning abortions, was common. Pliny's remarks are representative of a culture in which knowledge of the body was not the sole preserve of health care practitioners.

Women's concerns regarding gynecological irregularities were recorded in the votive offerings in many of the temples throughout the Greco-Roman world. Particularly popular were queries about childbirth. The famous Epidaurian *iamata* of the fourth century BCE offer several examples. Their content suggests either a lack of basic awareness of human anatomy or merely a lack of concern. For instance,

they tell of Kleo, who was reportedly pregnant for five years before she arrived as a supplicant to the Asclepieion. The god helped her, and after just one night of incubation, she left the temple and gave birth to a son, who, as soon as he was born, washed himself and walked about with his mother.[94] Another woman, Ithmonika of Pellene, came to the temple and asked Asclepius for a daughter. The god granted Ithmonika her wish, and she carried the child in her stomach for three years before returning to the sanctuary again and finally giving birth.[95] Yet another woman, Andromache from Epirus, arrived in the temple wishing for children. While sleeping in the *abaton,* she saw a dream in which a handsome young boy uncovered her, and after that the god touched her with his hand. From this a son was born to Andromache by a man named Arybbas.[96] Another woman from Troezen also came as a supplicant to the Asclepieion wishing for a child, which Asclepius then granted her.[97] Relics from other temples include figures of pregnant women[98] and replicas of wombs.[99] Indeed, representations of childbirth appear regularly among the votive offerings found in temples.[100] They affirm that, much as with the case of other bodily malfunctions, women were prone to address a healing deity about gynecological matters. This consideration of women's expectations of childbirth indicates that the presence of midwives and physicians in the *domus* did not mean that the gods were not also considered to play an important role.

Conclusion

Roy Porter, in his groundbreaking article, "The Patient's View: Doing Medical History from Below," drew medical historians' attention to the distorted picture that is bound to emerge from what Porter referred to as a "physician-centered account of medicine

> For it takes two to make a medical encounter—the sick person as well as the doctor; and for this reason, one might contend that medical history ought centrally to be about the two-way encounters between doctors and patients. Indeed, it often takes many more than two, because medical events have frequently been complex social rituals involving family and community as well as sufferers and physicians. Moreover, a great deal of healing in the past (as, of course, in the present) has involved professional practitioners only marginally, or not at all, and has been primarily a tale of medical self-help, or community care. In medicine's history, the initiatives have often come from, and the power has frequently rested with, the sufferer, or with lay people in general, rather than with the individual physician or the medical profession at large.[101]

In respect to childbirth, which is an experience layered with a multiplicity of meanings and is as much a social event as a medical one, it is especially important to consider the intricacies of the relationship between the laboring woman and her attendants, both professional and lay. But despite its specificity, the behavior surrounding childbirth during the Roman era can also reveal some important characteristics of the prevailing health care system more generally. It demonstrates the complex relationship between care provided in the home and outside, by family members and health professionals. For example, birth usually took place at home but was supervised and assisted by professionals, predominantly midwives and doctors. Although evidence is lacking concerning the practicalities of the interaction between the parturient, her family, and the hired help, it is clear that assistance was not provided by the state and that it was essentially a business transaction between a customer and a consumer. As has been noted before, no licensing system of the medical profession existed during classical antiquity, and it was up to the health care providers to persuade their clients to hire them. As in other branches of medicine, matters of gynecology were not placed solely in the hands of agents of one discipline—deities were also approached. However, inscriptions and the works of physicians, as well as the legal sources, show that the services of midwives and doctors were habitually employed. Furthermore, the involvement of the family before, throughout, and after birth, alongside the fact that birth usually took place at home and was supervised by professional help, suggest that: (1) the *domus* was an important arena of the medical market place; (2) those with professional expertise were easily identified even without a licensing system; and (3) the frequency of birth in the *domus* and the involvement of professionals within it must have acted as a powerful agent of medical knowledge and practice.

Health Care in the Roman Army

Outside of the household, the army was the most significant arena in which health care was practiced during the Roman Empire, because of its scale, geographical reach, and connectivity.[1] Four main reasons underlay the imperial army's importance: (1) army bases acted as centers of health care accommodating medical practitioners, operating theaters, and places of recuperation; (2) the form of the military base itself, namely, its location, facilities, and architecture; (3) the high level of connectivity between the various legionary camps, military ports, and other imperial forts holding a *cohors* or an *ala* enabled a swift and consistent transmission of medical ideas and practices; and (4) the Roman imperial government's decision to assign one particular type of health care provider to its army—the Greek-trained physician. That the Roman imperial army chose these physicians allows an insight into the conceptual scheme guiding the imperial government, from the emperor at the top down through the legal, administrative, and military ranks, regarding the nature of health care, by reviewing the establishment, form, and aims of a medical corps. Through their preference for healers who were predominantly of Greek origin with a Hellenistic medical training, the Roman authorities dictated the dominant heuristic model that formulated illness as disease and a particular set of surgical procedures for treating injuries.[2] Because health care providers were influential in shaping beliefs about the nature of illness and in prescribing the sort of measures taken to tackle illness, the character of these individuals, their origin, and their background were highly relevant when patients evaluated treatment options and formed an expectation of their outcomes. Thus, looking into the manner in which health care was administered in the army shows what around three hundred thousand soldiers learned about health care; the identity, terminology, and methodology of those suitable to offer it; and the expectations of those who were treated by them. In addition, a high level of

central administration, along with the spread of military theories and techniques, turned the Roman imperial army into a network through which medical ideas and practices were easily diffused, with the type of health care offered in the individual military units canonized into a unified whole.

This chapter examines the role of the army in bringing Greek medicine of Hippocratic origin into a privileged position within the medical market place of the High Roman Empire, how it allowed and even encouraged medical knowledge to be transmitted in the areas with which it came into contact, and the dialectic relations of the Roman medical corps with the various communities and terrains in which the army was based. The army is a particularly important arena for a study of health care under the Roman Empire because of its unique nature. Unlike in civil society, military health care providers were not chosen by their patients in a medical market place.[3] Rather, they were appointed by the army, bestowed with a privileged legal position, and sanctioned to attend to the soldiers. A study of the medical practice within the Roman army can illuminate not only how this system was shaped into its particular form but also why.

Theoretical Background

If we are to believe Vegetius, medical considerations—and with them the authority of the army doctor—began at the recruitment stage and included a thorough medical examination ending with the *probatio*.[4] By asking from what regions recruits should be levied (1.2), whether recruits from the country or from the city were more useful (1.3), at what age recruits should be approved (1.4), at what height recruits should be approved (1.5), that the potentially better recruits should be recognized at selection from the face and physical posture (1.6), and from what trades recruits should be selected or rejected (1.7), Vegetius not only highlighted the Roman imperial government's awareness of the need to reject recruits who were physically inadequate but also revealed the theoretical framework that guided his advice to the emperor as well as the professional tradition that carried and supported it.[5]

Four of Vegetius's decisive factors for choosing the right candidates for military service had their rationale rooted in the realm of medicine. The notion that environment directly affects the human constitution went back to Hippocrates' *On Airs, Waters, and Places* and remained central in medical thought throughout classical antiquity.[6] Likewise, the contrast between civic and rural habitat is a common theme in the works of ancient medical authors.[7] Vegetius's requirement of a minimum height was, in fact, a long-lasting Roman policy. When Nero raised a new

legion, *legio I Italica,* it was composed entirely of Italians who were at least 6 feet high.[8] During Hadrian's reign, a man was allegedly dismissed from service in the Praetorian Guard and had to join the Urban Cohort for being merely 5 feet, 6 inches tall.[9] A passage in the Theodosian Code states that the normal minimum for recruitment in 367 CE was 5 feet, 7 inches.[10]

In addition, Vegetius's insistence that the potentially better recruits should be recognized at selection by their face and physical posture echoes the teachings of physiognomy—the examination and recognition of the character of the personality from the character of the body.[11] This notion can be traced back to Mesopotamia and was widely known in the Greco-Roman world.[12] According to Galen, Hippocrates invented physiognomy.[13] The actual word "physiognomy" appears to have its first attestation in the Hippocratic corpus.[14] Galen even tried to find a causal explanation for physiognomy using the humoral theory.[15] The application of medical and medical-related theories, such as physiognomy, that arrived from the Greek world as guidelines for the recruitment of soldiers and the administration of army life by Roman generals and authors, demonstrates how widespread these notions were. In turn, the implementation of these theories by an organization as large and as centralized as the Roman imperial army must have been a powerful means of spreading Greek medicine under Roman jurisdiction. It also encouraged the formation of one single health care system rather than a great number of local autonomous ones relying on local traditions and health-related beliefs and practices.

Vegetius's advice to the emperor regarding the recruits' physical requirements echoed preexisting habits and can be corroborated by other sources. His recommendation that a soldier must have good eyesight alludes to a prevailing practice in the army of the early Principate. A papyrus from the first century CE reports of a *probatio* who was discharged by three signatures on the grounds of poor eyesight.[16] P. *Oxy.* I.39 is a copy of a discharge of one Tryphon, son of Dionysius, a weaver, from military service by the presiding prefect of Egypt at the time, Gnaeus Valerius Capito. The examination was conducted in Alexandria and approved by three signatures. Physicians were actually members of the army, and, among their special duties, for which they were included with the *immunes,* they gave certificates to those who were physically unfit or required a discharge. Therefore, the three signatures on the discharge of Tryphon in P. *Oxy.* I.39 were not likely provided by military physicians.[17] The experience of Tryphon must have been—even if disappointing—highly informative regarding whose opinion the Roman institutions valued when it came to physical examinations. Tryphon was deprived of a lucrative career on the authority of three physicians. A *rescriptum*

from Trajan's reign concluded that men suffering from certain physical disabilities were, in fact, allowed to enlist.[18] Menenius recorded in his first book on military matters that Trajan was asked whether to discharge a man with only one testicle from military service. Trajan replied that this was not a suitable ground for discharge, naming Sulla and Cota as having had only one testicle, and therefore demonstrating that such a condition did not prohibit soldierly talent.[19] Because this was probably not the first time the issue of recruits who were not in perfect form came under consideration, the need for a *rescriptum* likely suggests either that the common practice was not in tune with the law or that a change of circumstances called for the law to be eased. The relatively peaceful era in which this *rescriptum* was given supports the former explanation rather than the latter. When seen from the *probatus*'s point of view, the requirements of a large employer like the Roman imperial army concerning the physical condition of its prospective employees, along with the sanctioning of one professional group to hold the necessary examinations, must have had a lasting effect on its notion of health care and its providers.

Vegetius's explanation of why certain recruits were better than others and how those most suitable could be easily identified rests on a detailed medical, ethnographical, and meteorological theory. According to Vegetius, all people who dwelt near the sun, being parched by great heat, were more intelligent but had less blood and were therefore less capable of fighting at close quarters because every wound could be mortal. The people from the north, on the other hand, who were remote from the sun, were less intelligent but had more blood. Recruits, Vegetius concludes, should be levied from the more temperate regions because the plenteousness of the blood of those who came from these mild provinces meant they would have a "contempt for wounds and death, and intelligence cannot be lacking either which prevents ill-discipline in camp and is of no little assistance with counsel in battle."[20] This climate-based ethnography, as Vegetius himself explained, won the approval of the most learned men.[21] Indeed, this kind of ethnography can be traced back to the Hippocratic treatise *On Airs, Waters, and Places,* the influence of which can be found in the works of Aristotle, whom Vegetius read, and in Poseidonius and Varro, both of whom Vegetius might have read.[22]

Greek medical, anthropological, and meteorological ideas also influenced Roman architects, as can be seen in the work of Vitruvius, whose treatise on architecture was presented to Augustus to "expound a complete system of architecture."[23] As an architect, Vitruvius was conscious of health considerations in the planning of cities. For example, he emphasized that, when the forum is placed in any city,

a spot as healthy as possible should be chosen for its theater and for the exhibition of games on the festival days of the immortal gods. The gathering of people in these places turned public events into health hazards. Vitruvius explained: the spectators who participate in these events, with their wives and children, sit outside the whole of the games, and the pores of their bodies being opened by the pleasure they enjoy, are easily affected by the air, which, if it blows from marshy or other noisome places, infuses its bad qualities into the system. These evils are avoided by the careful choice of a situation for the theater.[24] Vitruvius must have had at least a basic acquaintance with Greek medical theories. He was aware of the humoral system, the function of the various humors and the balance between them.[25]

According to Vitruvius, in setting out the walls of a city, the choice of a healthy location was of primary importance: it should be on high ground, subject neither to fogs nor to rains; its aspects should be neither too hot nor intensely cold but temperate in both respects. Proximity to a marshy place had to be avoided, because the morning air, uniting with the fogs that rose nearby, would reach the city with the rising sun. Charged with the exhalation of animals, these fogs and mists would diffuse an unwholesome effluvia over the bodies of the inhabitants and render the place pestilent. A seaside city exposed to the south or west would be insalubrious, because on summer mornings it would be hot and at noon it would be scorched. A city with a western aspect would be warm even at sunrise, at noon hot, and in the evening of a burning temperature.[26] The effect of such places on the inhabitants' constitutions would be devastating.[27] In addition, as in the Hippocratic treatise *On Airs, Waters, and Places,* Vitruvius placed much emphasis not only on the climate but also on the changes between the seasons. He explained that in exchanging a cold climate for a hot one, people rarely escaped sickness and were soon carried off, whereas those who passed from a hot to a cold climate, far from being injured by the change, were thereby generally strengthened.[28] Vitruvius concluded that much care should be taken to set out the walls of a city.[29]

The connection between health and location, as explained by Vitruvius and derived from the Hippocratic *On Airs, Waters, and Places,* also guided Roman generals in locating and designing military camps. Archaeology has shown that the generals of the Roman imperial army were conscious to avoid nonsalutary locations for their camps.[30] Onasander warned Roman generals not to camp in marshy sites, because the smell in such places caused illness and infection.[31] Vegetius explained that a camp should be built in a safe place with a sufficient supply of firewood, fodder, and water, and, if a long stay was planned, particular attention should be paid to choosing a salubrious site.[32] The site should not be pestilential or near

unhealthy marshes, nor in barren plains and hills. Tree cover was crucial.[33] These comments bring to mind the work of Celsus, whom Vegetius used as a source. In the first book of his treatise on medicine, Celsus explained that a healthy dwelling place was well lit, airy in summer, and sunny in winter. It should be far enough from rivers and marshes. Areas known to be pestilential were to be avoided at all cost.[34] The choice of a healthy site was also discussed by Vitruvius, who specified that it should be high and free from clouds and located where the climate was temperate. Marshy neighborhoods should be avoided because they caused pestilence.[35] Vegetius followed the recommendation of Celsus and Onasander and suggested that soldiers should not camp in pestilential areas or in proximity to marshes. In addition, Vegetius noted that the water supply, the seasons, medicine, and exercise were crucial to the health of the army.[36]

At the time of the High Empire, the Hippocratic tradition of *On Airs, Waters, and Places* along with Greek medicine, physicians, and various other representatives of Greek culture, had made its way to Rome. By the first century BCE, Greek culture had affected most aspects of Roman life. Setting aside some of the broader implications of the Greek influence on Roman society, the effect of Greek medicine, ethnography, and meteorology was particularly pertinent in two fields: architecture and health care. This was particularly important from the perspective of the Roman army.

The Establishment of the Roman Imperial Medical Corps

The decline of the Roman Republic and the establishment of the Principate led to the formation of a large professional army. By the middle of Augustus's reign, the number of legions in service stood at twenty-eight.[37] They were deployed in the frontier provinces, which were predominantly controlled by Augustus himself via *legati Augusti pro praetore*.[38] On his return to Rome in 13 BCE, Augustus settled on the length of service for the legionaries (sixteen years) and the amount of money they should receive when discharged. "Augustus," Tacitus stated, "seduced the army with gifts."[39] Dio explained how "Augustus's object was that the soldiers, by being enlisted henceforth on certain definite terms, should find no excuse for revolt on this score."[40] By 5 CE, the length of service increased to twenty years, with an additional reserve period of five years.[41] In order to finance such a vast professional fighting force, Augustus suggested in 5 CE that public funds could be allocated annually for military pay and rewards.[42] Although this plan did not materialize, Augustus was able to establish an *aeraium militare* (military treasury) the following year.[43]

The expansionist policies of the early Empire took the legions far away from Rome and into hostile lands. The sick and the wounded could not always rely on ad hoc arrangements for medical care or on a friendly billet in a nearby town. The high cost of maintaining a large body of professional soldiers and the emperor's reliance on the support of the soldiers as the basis of his political power called for a reliable solution for health care provision within the army.[44] Augustus must have realized it was in his own interest to look after the well-being of the soldiers.[45] Indeed, Augustus and future emperors consciously fostered the idea of a personal relationship with the soldiers by either paying the soldiers' wages themselves or by entrusting this responsibility to the provincial procurator, who was responsible to the emperor and thus the legate. This mechanism served two purposes: it associated payment with the emperor and prevented local commanders from developing political aspirations of their own.[46] Under these circumstances, the medical corps was established.[47] It was designed to attend to the soldiers' health on and off the battlefield in order to maintain an air of paternal responsibility on behalf of the emperor to his soldiers and to minimize the loss of expensive human resources to avoidable deaths, permanent disabilities, and poor health within the ranks. Thus, if a soldier became ill, medical treatment was supposed to be provided to him for free.[48] Augustus probably dedicated a whole section in his *Disciplina Augusti* to the administration of health care within the army. The work itself, unfortunately, did not survive,[49] but the motive behind it must have been the constant need for military physicians.[50]

Vegetius's description of the medical corps during the High Roman Empire suggests a high level of professionalism among army physicians and a considerable degree of monopoly over the provision of health care granted to them.[51] Legal sources confirm that army doctors formed a distinguished group in the eyes of the Roman law. According to Modestinus, army doctors were exempt from *munera civilia* under the pretext of being absent *rei publicae causa*.[52] The Roman law also acknowledged the importance of physicians in civil life by protecting *medici,* who were employed by the municipalities, from forced conscription.[53] Modern scholars have been inclined to accept the testimony of Vegetius on the basis of corroborative evidence, mainly archaeological and legal. Roy Davies has argued that "one of the most important groups of men in the Roman army was the medical staff. They had various titles but by far the most common was *medicus,* the connection of which with *medicina* is obvious."[54] Moreover, the provision of medical services within the army, undertaken by a professionally unified group of health care providers, was not necessarily representative of contemporary civil society.

An inscription from the legionary fortress of Lambaesis in Algeria even records an association of a group of soldiers (*collegium*) that included the officer who was in charge of the legionary hospital (*optio valetudinarii*), the *pequarii* or veterinary surgeons, a *librarius* or clerk, and the *discentes capsariorum* (which Nutton and Domaszewski took to be pupil hospital orderlies).[55] This is not the only evidence of army physicians belonging to a *collegium*. Two references to such associations (*collegia*) occur in the Roman fleet in inscriptions that documented two instances of a *medicus duplicarius*.[56] The title of *duplicarius,* which was attached to the *medicus,* is particularly notable. It means that this *medicus* received double rations as a reward. It was an official title, which means that the Roman institutions sanctioned the special recompense for soldiers who acted as physicians. However, as Davies has pointed out, this does not necessarily mean that an association of physicians bearing this title (*collegium medicorum duplicarium*) existed. *Collegium* can also take a similar meaning to *commilito,* which means a fellow soldier.[57] Davies maintained, however, that "it may be thought likely that there was an effective central organization for all *medici duplicarii* throughout the fleet."[58] Taken together, all this evidence shows that the imperial government encouraged an institutional arrangement of health care provision within the army. The consequence of this arrangement was that medicine—as it was practiced within the Roman imperial army—and the practitioners who acted as army doctors and were predominantly of Greek descent and training, were elevated to a privileged position within the Roman health care system. Health services within the army were arranged on a grand scale. Consequently, army doctors and the type of health care they practiced gained credence and higher reputation in comparison to other methods of health care and their agents that were available in the Roman medical market place. The existence of army doctors, the formation of *collegia* that included military physicians, and the training of prospective army doctors in this environment and by these people were likely to have had far reaching effects on the attitudes of all those serving in the Roman army and beyond concerning health care.

The administration of health care within the Roman armed forces under the High Roman Empire followed general guidelines issued by the Roman government, as the legal sources divulge. The second-century CE jurist Tarruntenus Paternus attributed the duty of attending to the sick (*valetudinarios inspicere*) to the commanding officer.[59] The overall responsibility for the well-being of sick soldiers lay with the emperor, as their commander in chief.[60] Hadrian used to visit the sick troops, as did Trajan and Lucius Verus.[61] Hadrian also took care to send his governors to inspect sick soldiers, as can be seen from the report of Arrian.[62] Indeed,

in his article on the daily life of the Roman soldier, Roy Davies concluded that sick troops had an excellent medical service to look after them: lists of the sick were made,[63] they were put in hospital[64] or taken on stretchers to the coast[65] or to spas[66] to recuperate, and special medicines and invalid diets were provided.[67] This impression was not reserved to those with the privilege of hindsight. According to Tacitus, all medical personnel were well trained, with even the soldiers being taught first aid.[68] Tacitus also noted that when acting as commander in chief at the Rhine, Germanicus visited each wounded soldier in person.[69] Similarly, Onasander tells of doctors who attended the wounded.[70] The personal connection between the *princeps* and the soldiers, the attention paid to their well-being, and efforts taken by the *princeps* to provide access to the best of medical care come to the fore in the testimony of Velleius Paterculus, who related the following story about Tiberius:

> And now for a detail which in the telling may lack grandeur, but is most important by reason of the true and substantial personal qualities it reveals and also of its practical service—a thing most pleasant as an experience and remarkable for the kindness it displayed. Throughout the whole period of the German and Pannonian War there was not one of us, or of those either above or below our rank, who fell ill without having his health and welfare looked after by Caesar with as much solicitude indeed as though this were the chief occupation of his mind, preoccupied though he was by his heavy responsibilities. There was a horsed vehicle ready for those who needed it, his own litter was at the disposal of all, and I, among others, have enjoyed its use. Now his physicians, now his kitchen, and now his bathing equipment, brought for this one purpose for himself alone, ministered to the comfort of all who were sick.[71]

The sick and the wounded within the Roman imperial army seem to have had very clear notions as to the identity of their prospective health care providers; these providers were within reach, and the administration of health-related services was undertaken in a similar manner as any other military activity.

Importantly, the establishment of the imperial army medical corps was a continuous process undertaken by all *principes* and evolving over time. Velleius Paterculus's testimony and epigraphic evidence suggest that in the first century CE, the provision of medical care within the army was still not free from ad hoc arrangements. In the case of Tiberius, the general offered wounded soldiers the services of his own physician, and no mention is made of a military physician on the premises. Epigraphic evidence from tombstones affirms that ad hoc solutions were not uncommon. For example, they can be seen in the case of Tiberius

Claudius Hymnus, a *medicus* of the *legio XXI Rapax,* who could not have been enlisted in the legion as a soldier—because he lacked Roman citizenship—but served as a *medicus* nonetheless.[72] Although the *principes* desired a specialized body of army physicians, it took some time for this to come to fruition.

The Responsibilities of the Army Physician and of the Medical Corps

The medical corps was necessary, because army life called for a particular set of medical skills. Battlefield wounds required army physicians to master certain surgical procedures that civilian physicians were not compelled to learn.[73] Although civilian doctors would have avoided abdominal surgery whenever possible, the military physician often found himself with no choice.[74] Plutarch recorded the exceptional accomplishment of a military physician named Cleanthes, who treated a sword injury in the lower chest in the age of Cato Minor. The wounded soldier was smeared with blood, with most of his bowels protruding. The physician, however, did not abandon his patient. He went to him and tried to replace his bowels, which remained uninjured, and to sew up the wound.[75]

A similar procedure is described by Celsus, who devotes a few chapters of his treatise on medicine to wounds caused by missiles and their extraction from the body. Celsus, who provided the only description we still have on the treatment of wounds in Roman warfare, gave instructions for extracting missiles, arrows, lead balls, pebbles, etc. and what to do if the missile was also poisoned. He explained, too, which surgical instruments were necessary and how to use them.[76] Such surgical procedures became commonplace among Roman physicians and were still advocated by Paul of Aegina (625?–690?), Abukasim (936–1013), Paré (1520–1590), and the Italian Renaissance doctors.[77] The duration of these surgical procedures and of the design of the medical instruments used to perform them indicate the clinical connection between the type of injury and the medical approach to it. As with the case of midwifery forceps, which, because of the alignment between the instrument and the human anatomy, did not change shape from classical antiquity until the modern era, the instruments used in the treatment of battlefield injuries caused by projectiles, swords, and daggers were similarly well suited to their task.[78] Indeed, these techniques were not abandoned until new types of injuries were brought about by new types of weaponry.

Although there is little doubt that the success rate for such complicated procedures was low, most military injuries were flesh wounds, caused by cutting weapons (swords, lances, daggers) and by projectiles (arrows, spears, sling bullets, and

A reconstructed model of the military hospital (*valetudinarium*) in the double legionary fortress at Vetera (Xanten), first century CE. Courtesy LVR—Archaeological Park Xanten / LVR—LandesMuseum Bonn.

artillery bolts) and the chance of recovery from these was much greater. Celsus gave instructions on how to extract an embedded broad weapon using an instrument he referred to as the "Scoop of Diocles."[79] Such an instrument was, in fact, found in Ephesus, which suggests both that the testimony of Celsus is reliable and that there was a considerable level of standardization in medical equipment and practices.[80] Nevertheless, a significant proportion of the injuries requiring surgical intervention likely resulted in gangrene and, finally, amputation. The method of circular amputation prescribed by Celsus was still in use as late as World War I for stumps fitted after emergency amputations.[81] This technique allowed primary closure and is still considered reliable. Furthermore, the work of Celsus and similar medical handbooks must have been in circulation among military physicians and accessible in the military forts for the medical staff to consult if army doctors felt confident in leaving their own copies back home.[82] A letter of an army physician to his mother, asking her to shake the dust off his medical books and remove them from the window, indicates that professional medical literature was available in the camp's *valetudinarium*.[83] All the evidence indicates that the techniques Celsus advocated were common throughout military hospitals. Therefore, a specific

set of skills was clearly needed by the army physician to deal with his military tasks. Being any army physician was a specialized business.

Considerations of health within the army, and with them the jurisdiction of the army physician, extended beyond battlefield activity and injuries, however. Recruitment depended on passing a medical examination, and, on the recommendation of a military physician, wounded or sick soldiers in active service were exempted from daily tasks, sent to recuperate, and even discharged before completing a full period of service. An examination by an army physician could temporarily relieve a centurion from his command and hand it over to his *optio*.[84] The physician was also authorized to confine a soldier to bed for a period of recuperation.[85] Moreover, if a soldier was released from service because of an injury or illness (*causaria missio*), he was still entitled to the same rewards that he would have received after completion of twenty-five years of service, in the case of auxiliaries, or twenty for legionaries. A diploma of Vespasian dated 70 CE to the "*causarii*, who have served in *legio II Adiutrix pia fidelis,* who have become ineffective for war" is a case in point.[86] *Dig.* 49.16.13.2 declares that a soldier invalided out of the army was entitled the *praemium*. *Dig.* 49.16.13.3 defines a *missio causaria* as "when anyone, because of a weakness of mind or body, is declared not at all suited for military service." Although the role of physicians in discharging soldiers on medical grounds is not explicitly stated in the legal sources, the plausible conclusion from *Dig.* 27.1.6.15 is that soldiers who were invalided on account of ill health were eligible to all rights, immunities, and privileges entitled to veterans who completed their period of service.[87] Insofar as the act of discharging a soldier on medical grounds required an official decision and because the Roman law acknowledged the authority of physicians in the army, their professional opinion was very likely required on such a distinctively medical matter.

Poor health was also a legitimate and common reason for the temporary incapacitation of soldiers. Detailed records were needed to list the whereabouts and activities of the soldiers within the unit. The discovery of several hundreds of wooden writing tablets at the Roman fort of Vindolanda near Hadrian 's Wall offered new evidence on daily life. For example, it reveals how sickness and accidental injuries could occur in large numbers in an apparently peaceful period, thus filling some of the beds in a legionary hospital.[88] Such lists were important for commanders to be able to make a true assessment of their units' force at any given moment. Three types of reports have been identified: (1) a morning report, which included the orders of the day, the number of junior officers and men, and their duties; (2) a monthly inventory of personnel; and (3) a *pridianum,* which was a yearly record of a unit

on December 31st.[89] A papyrus from Dura dated 222–4 CE records that one man was sick (*aeger*), a dozen or so had been ill and were not fit for service (*n*(*on*) *s*(*anus*)), another had not returned, presumably because of illness, and one had died.[90] Similarly, a third-century CE ostracon from Tripolitania named Suplicius Donatus, Titus Buzuris, and Aurelius Rufus as sick.[91]

The high command's need to know how many of the soldiers were fit to fight explains why the entry in the *pridianum* of *cohors I Hispanorum* in 105 CE of the men who were unsuited for combat included the sick (*aegri*).[92] A duty roster for May 18, 90 CE, from Vindolanda, shows that 31 out of 752 men were unfit for duty: 15 were ill, 6 were injured (*uolnerati*), and another 10 suffered from eye problems.[93] These pieces of evidence demonstrate the high toll of health-related problems on the military unit. They also show that commanders wanted to know how many of the soldiers under their command were capable of performing their duties and that this assessment was undertaken on a regular basis. Excluding a soldier from the usable force posed real concerns to the commander and had significant financial consequences upon the imperial purse. Therefore, it is safe to assume that the Roman army sanctioned an official magistrate with the responsibility of distinguishing the *invalidi* from the *capaces.* Though not explicitly stated, the physicians were most likely responsible for making this judgment.

The propensity of the military body to succumb to the health-related hazards it was exposed to led to the extension of the army physician's responsibilities into the realm of preventative medicine. Food poisoning and pestilence were always impending dangers. A letter of a soldier of the Egyptian fleet, one Claudius Terentianus, to his father reveals the perils of food poisoning.[94] He informed his father that, while he was ordered to go on duty, he was altogether unable to go down to Neapolis. The reason was a violent attack of fish poisoning that had incapacitated the entire unit. Pestilence was responsible for more than half of the casualties of Marcus Antoninus's army in Parthia, a ratio not uncommon in Roman times.[95] Pestilence within the ranks threatened civil society, too. The return of Lucius Verus and the Roman legions from the eastern frontiers in the mid-160s brought the plague into the Roman world, where it remained endemic for many years.[96] The *Historia Augusta* says of Lucius Verus that "it was his fate to bring the plague with him to those provinces through which he made his return journey, right up to Rome."[97] Galen's choice to leave his place of residence in the city of Rome in 166 CE and return to Pergamum was most likely motivated by his fear of that plague.[98] Ammianus Marcellinus and Orosius attest that the horrific sights were not forgotten even centuries later.[99] Preventative measures taken by military physicians in

the face of pestilence included the utmost care being paid in the choice of a base's location and architecture, attention to the provision of fresh water, disposal of waste, provision of a varied diet, and the attentive selection of recruits.[100]

Much like in civic society during the High Empire, the practice and set of notions regulating an army doctor's actions did not draw a dichotomy between scientific medicine and religiously oriented treatments. On the analogy of civic society—and taking into consideration that the beliefs of those who joined the army must have been fairly established by the time they were recruited, as was their basic understanding of the nature of illness and prospective course of action for treating it—the army doctor was likely to have applied these beliefs and understandings when treating the sick and the wounded among the ranks. In this respect, the inclination of military physicians to dedicate altars to their divine patrons Asclepius, Hygieia, and Salus for the good health of their fellow soldiers should also be seen as a preventative measure, insofar as a division between lay or scientific medicine and religious medicine never took the form of "either/or" in the Greco-Roman world.[101] Thus, Marcus Aurelius [-]ocomas at Binchester dedicated an altar "to Aesculapius and Salus for the well-being of the *ala* Vettonum."[102] Sextus Titius Alexander, *medicus* of *cohors V Praetoria,* dedicated an altar in 82 CE "to Aesculapius and the good health of his fellow soldiers."[103] Ulpius Iulianus made a dedication in 198 CE for the good health of *cohors III Aquitanorum,* of which he was a *medicus.*[104] The *medicus* of *legio II Adiutrix* dedicated to Asclepius circa 147 CE.[105] Marcius Marcelus, a *medicus,* dedicated to Asclepius and Hygieia.[106] The *medicus* of *cohors IV Aquitanorum,* who was living in Ostia, while stationed at Obernburg in Upper Germany, set up an altar to Apollo, Asclepius, Salus, and Fortuna for the good health of the commanding officer of the unit.[107] Dedications to Asclepius also came from soldiers whom the *medici* saved. Marcus Ulpius Honoratus, a decurion of the *equites singulares Augusti,* set up an altar in fulfillment of a vow "to Aesculapius and Hygieia for the good health of himself, his family, and Lucius Iulius Helix, *medicus,* who has diligently and devotedly looked after me."[108]

Within a legion, the provision and administration of medical aid lay under the jurisdiction of the camp prefect (*praefectus castrorum*); however, the actual running of the hospital was the task of a more junior officer, the *optio valetudinarii.*[109] The responsibilities of this magistrate included, in addition to the administration of the *valetudinarium,* the provision of medical supplies and special dietary requirements for the camp. The *valetudinarium* was the primary workplace of the military physician.[110] The ability of the Roman imperial doctors to perform all these tasks resulted from the high level of connectivity within the army, but it also con-

tributed to its maintenance and, most likely, its improvement.[111] The fact that drugs from all over the Roman world (to name but one example) were accessible to physicians—at least in the commercial, economic, and scholarly centers—is demonstrated by the works of pharmacologists. Scribonius Largus's short treatise on drug recipes included 249 vegetables, 45 minerals, and 36 animal substances drawn from the entire Mediterranean region or even imported from farther east or from Africa via Alexandria.[112] Pedanius Dioscorides of Anazarbus, whose five books *On Materia Medica* included references to over 700 plants and attained canonical status in late antiquity, also included information on all the herbs known in the Roman world in his works. Dioscorides attributes his extensive knowledge to his travels from "a soldierly life."[113] Whether Dioscorides actually was an army physician is still disputed, but there is no reason to dismiss his claims that he traveled extensively and that these travels widened his professional horizons.[114]

Another pharmacologist who composed a professional treatise, this time in verse, was Andromachus the Elder, who later became personal physician to Nero and attained fame through his universal antidote, *Galene,* which contained no fewer than sixty-four ingredients.[115] Statilius Crito is yet another example of a pharmacologist and a royal physician who, while living in Rome with access to information and drugs imported from all over the Empire, could have composed a well-received treatise on drugs.[116] Such an accumulation of pharmaceutical knowledge, canonization of its use, and distribution of *materia medica* could not have come into being without a preexisting network of safe roads and sailing routes on the one hand, and an empire-wide demand on the other. The spread of three hundred thousand soldiers throughout the Roman world enabled such a level of connectivity. The deployment of these soldiers created the demand for health care services wherever the army camped. The imperial administration of the army, which recognized the need for health care provision among the ranks and identified those who were deemed suitable to offer it, created a demand for medical knowledge and *materia medica.* In the realm of commerce, such a policy must have instigated the trade and distribution of the knowledge and use of this *materia medica* throughout the Empire.

The demand for *materia medica* by the army, and the facilitation of this demand by a worldwide network of commerce and knowledge, is also attested to by the existence, architecture, and administration of the military hospital (*valetudinarium*). The first archaeological evidence of a large-scale medical administration within the army comes in the form of *valetudinaria* within the legionary camps, such as that from Haltern, the foundation of which could be dated between 7/5 BCE and 9

CE. The existence of a building that functioned as a *valetudinarium* in various legionary camps in all corners of the Roman Empire and that shared a similar design and scale proves there was an imperial guiding hand in the provision of health care within the army.[117] Historians generally agree that a *valetudinarium* existed in each legionary fort, and all *valetudinaria* were of an identical shape.[118] The design of the *valetudinaria* in the fort evolved out of the arrangement of tents used as field hospitals when the unit was on campaign.[119] Harig has argued that the *valetudinaria* were developed in the army. He identified the site of Haltern as having had the first *valetudinarium* built on it, because it was a fortification constructed during the reign of Augustus on the Lippe frontier and was a part of the *princeps*'s plan to form a health care system within the army.[120] This arrangement led to the form of the *valetudinarium* when the fort was constructed.[121] In his manual on *castrametatio,* Hyginus mentioned the field hospital in the temporary camp and assigned a large frontage to it.[122] In addition, Hyginus emphasized the importance of a quiet position for the *valetudinarium* "for the convalescent men."[123]

Roy Davies has noted that in all fortresses where a *valetudinarium* has been identified its position seems to follow Hyginus's recommendation.[124] Examples are the field hospital in Masada, built during the winter of 72/3 CE, and the *valetudinarium* in Vetera, built by Nero. Like those in Bonn, Haltern, Vindonissa, Lauriacum, Carnuntum, Aquincum, Vindobona, Inchtuthil, Caerleon, and an earlier Claudian fortress in Vetera, all these *valetudinaria* have similar features. For example, they show that each century was assigned a cubicle and that these cubicles were arranged on either side of a circular corridor. There were also lavatories, baths, a kitchen, rooms for medical supplies, and treatment rooms.[125] Likewise, evidence shows hospitals in forts holding a *cohors* or an *ala*.[126] Although these tend to be of a slightly different shape, because of the smaller scale of the fort, the medical considerations behind the planning seem to be identical. In Fendoch (built ca. 83 CE), there are ten small wards, each designated to serve one century of the *cohors miliaria*. There is also a larger operating theater.[127] Similar examples are the fort at Corbridge and at Pen Llystyn.[128]

Patricia Baker has challenged the methodology that led archaeologists to identify certain buildings as *valetudinaria* on the basis of their similarity to the one found in Neuss, located on the lower Rhine, and identified by Koenen as a military hospital. Koenen identified the Neuss *valetudinarium* as such on the basis of the description of military hospitals found in Hyginus and what Koenen identified as medical tools found onsite.[129] Baker's reservations regarding the function of military hospitals as a place of convalescence for sick or wounded soldiers re-

lies on two comments from the *Historia Augusta*. The first is taken from the biography of Hadrian and describes the emperor visiting the soldiers in their place of residence (*aegros milites in hospitiis suis videret*). The second is taken from the even more dubious biography of Alexander Severus, who also visited the sick soldiers at their quarters and not in the *valetudinarium* (*aegrotantes ipse visitavit per tentoria milites*).[130]

Notably, in addition to the overall questionable nature of the *Historia Augusta,* their late date of composition (in the second half of the fourth century CE) might have led the author(s) of these imperial biographies to place the visits of Hadrian and Alexander Severus not in a hospital but in the soldiers' place of residence, because no evidence exists of a *valetudinarium* after 250 CE, and the author might have been describing the military camp of his day, rather than that of the second and early third centuries CE. Also possible is that the sick and the wounded preferred to convalesce in their usual place of residence and not in a hospital, as is often the case in modern armies, where the existence of a military hospital is beyond dispute. Either way, these two references do not contradict the existence of the military hospital. An inscription from an auxiliary fort, Mantissa Addendorum, occupied by the second cohort of *equites,* at Stojnik in Serbia, has the word *valetudinarium* inscribed on it.[131] Although the provenance of the inscription is not noted, its existence proves that there was a *valetudinarium* in the camp.[132] Furthermore, inscriptions mentioning the *optio valetudinarii* provide additional evidence for both the existence of *valetudinaria* and for their being part of an imperial design.

An imperial guiding hand, a unified health care system, and a high level of connectivity enabling the common application of *materia medica* across the Roman world is further demonstrated by evidence for the duty-free dispatch of *materia medica* to the various army units and by the existence of rooms for these medical supplies in each *valetudinarium.* An example of this is a large quantity of barrels of medicated wine with an estimated capacity of 678 liters, which were sent from more than one customs zone to the legionary fortress of Aquincum and were stamped "duty-free on account of the hospital of *legio II Adiutrix*."[133] The legionnaires of *legio II Augusta* at Caerleon drank Aminean wine as a remedy for diarrhea and the common cold.[134] An amphora containing a wine flavored with horehound was dispatched to the legionary site of Carpow as a cough medicine.[135] The fact that this particular prescription is found in Dioscorides suggests that military physicians preferred to use familiar medicaments in common use across the Roman world, rather than having to rely on local cures and therapeutic methods. Furthermore, this tendency of the medical physicians was accommodated by the

Roman administrative system. The very existence of a *seplasiarius,* who was responsible for medical ointments, suggests that the production, distribution, and codification of use of *materia medica* were administered on an imperial level.[136] Otherwise, the title would have been meaningless and not worthy to be inscribed on tombs.[137] As Nutton has it, this harmonized plan indicates a standard organization of personnel within the hospital.[138]

The number of medical staffers in the army was quite substantial, and they were highly trained.[139] Consequently, a hierarchy must have existed within the medical staff itself, likely founded on professional merit.[140] A physician like Pedanius Dioscorides, who cited Galen, or Callimorphus, who was known to Lucian, could not have been in the same rank as Malchus, *medicus* or *numerus Palmyrenorum*.[141] If a soldier fell ill or was wounded, he would have been cared for in the medical service of his unit. Even on the battlefield itself, the wounded soldier could expect medical help from the *milites medici* or from the *capsarii,* so named after the bandage box (*capsa*) that each one carried.[142] Behind the lines or in the fort hospital (*valetudinarium*) in peacetime, soldiers could expect a more senior *medicus.* Also, a fully qualified veterinary surgeon was in charge of the men looking after the animals.[143]

In addition, if it was necessary for Numisius, an army physician during the reign of Caracalla, to beseech immunity from civic liturgies from the emperor, then some physicians must have had the option to join the army for a relatively short period of time without being subjected to military law (i.e., without taking the soldier's oath).[144] Soldiers were automatically exempt from civic liturgies, meaning that Numisius would not have needed to make this request if he was a soldier.[145] Furthermore, immunity from civic liturgies was also guaranteed to veterans for some time after their release from the army.[146] However, tombstone inscriptions show that physicians who were also *miles* were not uncommon.[147] Among the physicians within the military unit, a *medicus castrensis* or a *medicus castrorum* was probably of a higher rank than a *medicus* of a cohort.[148] The Greek name of most of the military physicians suggests that the kind of health care the Roman government provided for the troops was of the highly reputed Greek tradition.[149] In fact, some inscriptions commemorating physicians who served in the Roman army were written in Greek.[150]

The position of military doctor must have been lucrative enough if physicians of high repute like Crito, Dioscorides, and Largus chose to enlist.[151] Stertinius Xenophon of Cos, although he might not have acted as a military physician, accompanied Claudius in his expedition to Britain.[152] Even Galen, who was not a mili-

tary doctor himself, referred to some military physicians as being highly trained.[153] In addition to earning a salary, the military physician had the chance to extend his professional horizons. Celsus claimed that a military doctor had the opportunity to learn more about internal organs than did a civilian physician.[154] Galen criticized the military physicians of Marcus's German campaign for not operating on dead enemy soldiers to further their knowledge of anatomy. Low-rank soldier-physicians certainly had a long climb up the hierarchy before they reached the position of a *medicus ordinarius,* whose status was similar to that of a centurion; however, the position of *medicus ordinarius* was attractive enough to draw civil physicians of some distinction, who must have been lured by the position's prestige and the privileges bestowed after retirement. In sum, although the administration of medical care within the Roman army was highly flexible, the army was apparently always provided for. In times of need, soldiers were treated by civilian physicians, personal physicians of emperors, high-ranking Romans, and generals. And on the battlefield, soldiers could expect medical care from fellow soldiers who were trained as part of their military service as medics.[155]

Military Physicians and Local Populations

The arrangement of medical services, the recruitment of physicians, the construction of *valetudinaria,* and the common use of *materia medica* throughout the Roman army had a defining influence on the medical practices and beliefs in the regions where the army was based. Contact between the soldiers and the local populations was continual. Transition of physicians from civic to army life and vice versa promoted the permanent exchange of health-related knowledge and practices between the armed forces and the civilian population. These interactions could have taken the form of a paid service administered by an army doctor to a civic patient or in a more academic form, such as the exchange of the nature of an illness indigenous to a particular region and the means to cure it. Finally, the visual impact of the camp's architecture, with the roads leading toward it and the hygiene and sanitary infrastructure built and maintained to improve health within the army, must have spread knowledge and skills that the local population was unable to ignore.

One Marcus Ulpius Telesphorus(?) was a *medicus* of the first *ala Indiana* in Upper Germany then of *ala III Asturum* in Mauritania Tingitana before retiring to become medical officer of health at Ferentium in Italy.[156] The ease with which a retired army physician was able to secure a position in civic society demonstrates that retiring army physicians were considered qualified enough to practice in

this affluent place. Taking up a post as a physician to civilians in an area not heavily populated by soldiers meant that the medical expertise one had gained during military service could now be disseminated among one's civic clientele. Another retired army doctor, Marcus Valerius Longinus, was awarded honorary membership of the town council of Drobeta in Upper Moesia after he had left the army and settled there. This honor was bestowed upon Longinus for his services to the city, which, as his title indicates, were probably medical. As in the case of Marcus Ulpius Telesphorus, the ability of a retired military physician to secure a practice in civic society indicates the good reputation of army doctors. In turn, this repute meant that medicine, as practiced in the army, was disseminated in civic society.[157]

Acting military physicians were expected to treat the local population and to gather relevant local knowledge.[158] Both aspects of this connection supported the creation of a unified Roman health care system. Pliny recounted that when Germanicus Caesar moved his camp forward across the Rhine in a maritime district of Germany, only one source of fresh water existed. Drinking it caused the teeth to fall out and the use of the knee joint to fail within two years. Physicians (whom, Pliny implied, were consulted) used to call these maladies *stomacace* and *scelotyrbe*. A remedy was found in the plant called britannica.[159] This episode demonstrates how the progress of the Roman army and the Roman imperial medical corps, together with a supporting network that collected and dispersed medical knowledge, improved the quality of health care. New terrains meant new illnesses. New illnesses encouraged the finding of new cures, either by army doctors themselves or by using local knowledge and experience. As Pliny noted, this herbal medicine was made known to the Romans by the Frisians, who at that time were a loyal tribe and in whose territory the Romans' camp lay.[160] It is an example of how the interrelations between a local population and the Roman army were beneficial to the health of both: the Roman doctors learned the nature of this ailment and how to treat it from the Frisians, and the presence of a Roman military force in the region meant that a constant supply of this drug was made available. Therefore, to understand the medical system of the army, awareness of the history of the development of each frontier and the differences between them is necessary. Their various natures of construction would have affected the interaction between the army and the local population and shaped it in a particular fashion.[161]

Significantly, the main duty of the Roman army in the provinces was to maintain order. Because there was no police force and the local government had only limited policing resources, the army functioned, to a large degree, as an army of

occupation. Government operations such as corn supply, tax collection, or the maintenance and securing of routes for commerce and communication were conducted by the army.[162] This meant that the interactions between the army and the local population occurred daily, particularly in the East, where the army was often based in the cities.[163] Elsewhere, interaction between the army and the local population took place at the *canabae* that habitually evolved around the Roman military bases, attracting veterans, traders, and local women with whom the soldiers often formed liaisons.[164] In these circumstances, osmosis of medical ideas and practice was inevitable.

The ties between the army unit and the local population usually extended to the realm of economy. Products of military workshops were sold outside the military camp and evidence supports the presence of smithies (*fabricae*) in army camps with a production scale that vastly outdid the unit's needs.[165] Paternus, in his first book on military affairs, discouraged the commander from allowing soldiers to carry out private work.[166] Such a prohibition would only be necessary if the reality was somewhat different. Because medical care is an essential commodity, the local population also probably paid for the services of army physicians. The manner by which medical knowledge, practice, and formation of authority influenced the local population can be inferred from two inscriptions from Heraclea Pontica. The first, an inscription on a statue base, is a dedication by one Marcus Xenocrates, a physician of the *evocati,* on a statue of Hygieia to Asclepius from some time during the second century CE:

> θεῷ Ἀσκληπιῷ καὶ τῇ ἑαυτοῦ πατρίδι τὴν
> Ὑγείαν Μάρκιος Ξενοκράτης ἰατρὸς
> ἰβοκατίων Σεβαστοῦ Ἀντωνίνου.[167]

The *evocati* were soldiers who had served out their time and obtained a discharge but chose to reenlist at the invitation of an officer. As soldiers, they were likely to enjoy the medical services provided within the legion. The same Marcus Xenocrates was also honored by a civilian association of actors in Heraclea Pontica for his profession (κατὰ τὸ ἔργον).[168] If Marcus Xenocrates was a physician of the *evocati* (ἰατρὸς ἰβοκατίων) as the inscription suggests, he was either an army physician who was not supposed to treat civilians or a civilian doctor who attended soldiers.[169] Either way, Marcus Xenocrates granted medical services to both soldiers and civilians. His Greek name and his link with the *evocati* suggest that he was a retired military physician. After their long years of military service, the *evocati* were probably accustomed to the type of health care on offer in the Roman army and

to the sort of professional authority that offered it, namely, Greek medicine and Greek-trained physicians.

These two inscriptions demonstrate that army doctors also attended to the local population, thereby spreading the type of medicine offered within the army and dictated by the Roman government's criteria for recruiting health care providers. The spread of Greek medicine throughout the Roman world was therefore a discernible consequence of the policy of the Roman imperial government to offer health care within the army, with the army serving as its agent. The army's attentiveness to local knowledge and the inclination of the Roman administrative system to spread the medical knowledge it thus acquired meant that the medical care practiced within the army and that which was used by the communities it came into contact with were not mutually exclusive. Rather, they were mutually supportive.

Conclusion

The foundation of the Principate necessitated the reconciliation of the existence of a great number of soldiers (who had taken up arms in response to large-scale financial inducements) and the need of the Roman state to control these armed forces by law. The solution was the creation of a large professional army. The deployment and tasks of the Roman imperial army also required the administration of a large-scale health care system to act in support of it. Augustus and future emperors preferred Greek or Greek-trained physicians to hold the positions of army healers, believing they offered superior medical care. The Roman imperial army included two categories of soldiers, which, in turn, created two types of military units. The first was made up exclusively of Roman citizens (*cives Romani*), whereas the second was made of non-Roman citizens (*peregrini*). Because the government preferred that physicians would join the army as *miles,* it became necessary to instigate a policy of bestowing Roman citizenship on those the government saw fit to serve as physicians.[170] By granting Roman citizenship and bestowing financial privileges, the *principes* created the legal reality and the economic conditions that encouraged these Greek physicians to join the Roman army as health care providers.

In consequence, Roman military camps were transformed into health care centers. They accommodated health care providers, operating theaters, and places of recuperation. Health care within the Roman imperial army enjoyed the resources of good practitioners and state-funded facilities such as hospitals, convenient locations on central trade routes, and certain tax-free *materia medica.* In turn, the

military physicians often had the opportunity to extend their professional skills. Being stationed in previously unfamiliar terrain meant they could treat previously unknown types of ailments, as can be seen in Pliny's depiction of Germanicus's German campaign.[171] Physicians who were trained in the Greek tradition expected to find causal relations between the human constitution and the environment.[172] Furthermore, army life enabled physicians to become acquainted with pharmaceutical materials from across the Roman world through military supply lines, a high level of connectivity, and army doctors' attention to local traditions. In addition, army doctors were likely to perform surgical procedures rarely conducted in civic life, thus improving their own medical knowledge and professionalism in general.

In a world that knew no licensing mechanism for medical practice, and in which health care providers of various sorts competed over the patients' trust and fees, the administration of health care within the army was a noteworthy exception. The appointment of army doctors, the bestowal of privileges upon them by the Roman government, and their exclusiveness as health care providers within the army barracks assigned army doctors a unique professional prestige that brought Greek medicine into a privileged position within the medical market place of the High Roman Empire. The grand scale of the Roman imperial army and the long duration through which one type of health care provider was favored must have created a large body of soldiers accustomed to prefer this type of health care. In addition, the army's deployment throughout the Roman world and its contact with civic society provided Greek medicine with a powerful agent. That the form of the military base itself, its location, facilities, and architecture, advocated this type of health care provision must have further increased the prestige of Greek medicine throughout the Empire.[173] Roman imperial generals were encouraged to use Hippocratic notions in order to distinguish salubrious sites for their camps from pestilential ones. Camp architecture invoked Hippocratic medicine, whose influence can be seen in the planning of the military hospital, water supply, hygiene facilities, and waste disposal mechanism. From the work of Vitruvius, we learn that Roman architects were conscious of both the Greek origin of health-related aspects of architecture and civic planning, and of the ability of architecture to educate. Together with the ethnographic theory—which Vegetius marked as important for recruiting the right candidates for military service and which can be traced in professional treatises from Hippocrates' *On Airs, Waters, and Places* through Vitruvius's *On Architecture* to Vegetius's *Epitome of Military Science*—the Roman army can rightfully be seen as a seminal agent in the promotion of Greek medicine throughout the Roman world.

Medical Tourism during the High Roman Empire

During the High Roman Empire, the reputation of various locations as centers of healing attracted the sick from far and wide. The temples of Asclepius in Athens, Cos, Pergamum, and Epidaurus; the thermal springs and sulfurous sweatbaths of Baiae; and the renown of Alexandria, Ephesus, and Rome for accommodating the best physicians of the Greco-Roman world are but a few examples. The therapeutic fame of each place was carefully constructed. The appeal of the temples was interlinked with a deity, the water of certain springs was thought to hold inimitable therapeutic prowess, and the prestige of a medical school or of an individual such as Caius Stertinius Xenophon or Galen attracted the sick to Alexandria, Pergamum or Rome. The means for promoting these places were equally diverse. Aristides' *Sacred Tales* and votive inscriptions within the temples celebrated the healing power of a deity. Aristides was an educated author who embodied the image of the Greek *pepaideumenos* and addressed his social and cultural peers. The votive offerings on the other hand, voiced the opinions of far wider sections of Greco-Roman society. Their testimonies, which were often edited by the priests at the temple, were addressed to future supplicants of Asclepius, who came from all tiers of society. Vitruvius's instructions on the building and situating of baths, Frontinus's notes on water supply, and Seneca's observations of the spa in Baiae appealed to readers of technical and philosophical works. The literary production and public lectures of physicians in cities like Alexandria, Ephesus, and Rome promoted their medical reputations.

This chapter considers the identity of those traveling for therapeutic purposes, where they traveled to and where they traveled from, and what these travelers hoped to gain. It does so within the context of three different types of locations: temples, water sites (including spas and baths), and cities. Although the physical locations

of these sites were often the same (temples were often built within cities, as were baths and spas), their appeal was of a different nature. Therefore, the reasons for traveling to them—whether from the next street, quarter, city, or continent—were also different. Identifying the elements that made up the appeal of each type of place yields a deeper understanding of the Greco-Roman health care system. Namely, it helps to reveal: (1) what was seen as the meaning of health and illness; (2) what was commonly viewed as the nature of health care; (3) who had the authority to provide it; and (4) where the interaction between patient and healer took place.

Temples

Temple medicine, particularly that associated with the cult of Asclepius, was among the most popular of the treatment options available during the High Roman Empire. Temples attracted sick worshippers, and the health care providers who wished to treat them, from across the Greco-Roman world. They also contributed immensely to the codification of medical practice throughout the Empire. According to Strabo, the city of Epidaurus was famous because Asclepius revealed himself to his worshippers there and then cured them. In consequence, Strabo reported, the Asclepieion in Epidaurus was always full of the sick, as were the Asclepieia at Cos and Tricca.[1] Testimonies of travelers and of those who wrote for travelers are revealing. Geographers, historians, poets, hagiographers, sophists, and authors of tourist guides all noted the continuous stream of health tourists.

The renown of an Asclepieion was reason enough to attract the Roman Aemilius Paullus to Epidaurus in 167 BCE.[2] Paullus, who was elected curule aedile in 193 BCE and augur a year later, embodied the influence of Greek culture on Roman life. As consul, he ended the Third Macedonian War at Pydna in 168.[3] His settlement of Greece, including the sack of Epirus, carried out the policy of the Roman senate. Notwithstanding, Paullus had a great interest in Greek culture. He gave his sons a Greek as well as a traditional Roman education and undertook an archaeological tour of Greece after the war with Perseus.[4] His journey to Epidaurus attested to the appeal of this Greek healing cult among the upper tier of Roman society, which was continuously increasing from the time of the Second Punic War onward. More than two centuries later, in his description of the Greek world, Pausanias took great care when describing both the Asclepieion in Epidaurus and the one in Pellene, thereby underlining them as noteworthy sites.[5] Thus, ever since Rome conquered the Hellenistic East, healing centers associated with the cult of Asclepius formed a great attraction to Romans. The renown of these temples as well as the actual journeys taken to them sustained a network of knowledge encircling the

entire Greco-Roman world. The appeal of the cult of Asclepius, and its affinity with Hippocratic medicine and its aftermath, turned the Asclepieia into important institutions of the Greco-Roman health care system at large.[6]

Pausanias himself was a periegetic writer. He composed a treatise entitled *Description of Greece,* which aimed to describe "all things Greek." In reality, the work of Pausanias is of a more limited scope and centered on the province of Asia. Pausanias's main focus was on monuments of the archaic and classical periods, along with their historical contexts, and the sacred (cults, rituals, beliefs). The organization of Pausanias's work as a tour of the *poleis* and extra-urban sanctuaries of Achaia provided a practical tool for contemporary travelers as well as providing later readers with information concerning the popular destinations during the High Roman Empire.[7] According to Themistius, who was active in the reigns of Constantius II, Julian, Jovian, Valens, Gratian, and Theodosius I, going to Tricca or sailing to Epidaurus on account of their famous Asclepieia was a long-standing habit.[8] Other commentators acknowledged the salubrious locations of the Asclepieia.[9] Christian authors from the end of the second century CE onward often referred to the popularity of Asclepius and his temples.[10] These journeys, as well as the recording of them, attest to a vibrant network of travelers and information surrounding temple healing that was present in the Greco-Roman world from the late Republic until late antiquity.

People who arrived in the Asclepieia were neither forsaking physicians nor expressing faith in a form of health care that excluded scientific medicine. In fact, the connection between Asclepius and physicians had already been stated in the *Hippocratic Oath*.[11] More than five centuries later, Galen also drew upon the authority of Asclepius in support of the professional authority of physicians.[12] Plutarch referred to Asclepius as the leader of all physicians, and, as late as the fourth century CE, Oribasius was thought to have held the first rank of medicine by imitating his ancestral deity, Asclepius.[13] In addition, the location of some of the more prominent Asclepieia in cities that were also medical, scholarly, and economic centers (e.g., Pergamum, Epidaurus, Athens, Cos, and Rome) meant that there were a large number of physicians practicing nearby. These physicians habitually offered their services in the temple to the worshippers who were keen to be cured and showed little regard for matters of methodology.[14] In this respect, the worshippers who arrived in the temples seeking cures for their ailments should be seen first and foremost as health tourists who traveled to medical centers that offered various treatment options in the same vicinity and harbored all sorts of health care providers, who all shared a mutual professional language.[15] The con-

glomeration of a large number of health care providers in one place benefited the sick by enabling them a wider spectrum of treatment options and increasing their power as consumers.

The reputation of the Asclepieion in Pergamum during the High Roman Empire must have been especially great. Statius reported that Venus herself entered the temple there, "where the great helper of the sick is present to aid."[16] According to Philostratus, Apollonius made his way to Pergamum after purging the Ephesians of the plague. In Pergamum, Apollonius instructed the supplicants on how to obtain favorable dreams and healed many of them himself.[17] Oribasius told of Teucer the Cyzicenean who arrived in the Pergamene Asclepieion on a quest to find a cure for his epilepsy, which the god provided.[18] Polemo came to the Pergamene Asclepieion to be cured from a disease of the joints. According to Philostratus, Polemo slept in the temple, and, when Asclepius appeared to him and told him to abstain from drinking anything cold, Polemo replied, "My good sir . . . but what if you were curing a cow."[19] Thus, although Polemo was reportedly critical of the treatment Asclepius prescribed him, Philostratus's story offers no doubt that Asclepius appeared before the renowned sophist. Polemo's great-grandson, the second-century CE sophist Hermocrates, was prescribed by Asclepius in Pergamum to keep a strict diet of partridge stuffed with frankincense, which cured him.[20] As has been noted before, a diet was often prescribed by both physicians and deities, and the ability to heal by prescribing a diet was the mark of an excellent physician. These testimonies display the popularity of the Pergamene Asclepieion as a destination for health tourism, particularly among the educated and the privileged. Even Galen, who practiced in the city early in his career, told of a person who arrived in Pergamum from interior Thrace looking for cure.[21] The emperor Caracalla is reported to have traveled to Pergamum because he was anxious to be treated by Asclepius.[22] Caracalla later rebuilt the Pergamene Asclepieion, and a coin showing him making a sacrifice there was minted.[23] These coins, like the testimonies of renowned worshippers, spread the reputation of the Asclepieia and now serve as evidence for the scale of their prominence.

The popularity of the Pergamene Asclepieion was such that it was reported to draw supplicants from throughout the province of Asia since its foundation in the early fourth century BCE and particularly during the prosperous time of the first and second centuries CE.[24] The continuous flow of worshippers in the direction of the Pergamene Asclepieion is made clear by the wide-ranging epigraphic evidence found in the temple.[25] By the second century CE, the cult of Asclepius was prevalent throughout Greco-Roman society, predominantly among the educated.

In the city of Pergamum, for example, the Asclepieion was the most popular place of worship,[26] and Martial used *Pergamus deus* as an alternative word for Asclepius.[27] Moreover, the predisposition of Roman emperors to bestow benefactions on the Greek cities resulted in some of the era's most attractive buildings, including temples of Asclepius.[28] The new second-century CE temple of Pergamum was erected during the latter years of Hadrian and the early years of Antoninus Pius by L. Cuspius Pactumeius Rufinus,[29] who was a friend of Aristides and of Galen's first teacher Satyrus. Satyrus, was, in turn, an associate of Aristides and had consulted him on medical issues.[30] This prosperity of the cult of Asclepius in Pergamum (and elsewhere) was made possible by the encouraging disposition of the Roman government toward Greek culture, the economic conditions that allowed large-scale building operations, the habit of benefactions, and the preexisting network of roads and sailing routes that enabled safe and comfortable long-distance travel.

The magnitude of the works at Pergamum indicates that the Roman emperor himself was involved in its foundation.[31] Other significant patrons of the Pergamene Asclepieion were Aulus Claudius Charax[32] and Aristides' friend, the consular Vitrasius Pollio.[33] The Asclepieion was dedicated to the universal god Zeus-Asclepius. The new buildings within the compound were, as Habicht argued, designed to act as a counterpart to the existing ones. Aristides himself distinguished between the old Hellenistic temple and that of the new temple built by Rufinus.[34] In turn, the worshippers who arrived in the temple were of two categories. On the one hand were the likes of Aristides, who came to worship an old healing deity who had resided in the same temple since the fourth century BCE. A second category included those who worshipped a god associated with the Roman emperor and with the imperial cult (Zeus-Asclepius). An imperial room existed in the Asclepieion itself.[35] It was well decorated, and its most prominent feature was a niche at the center of the rear wall that contained a statue of Hadrian. The statue itself is extant and can be identified by an inscription on its base. Nothing is known of how this room was used; however, an imperial festival was celebrated within the Asclepieion.[36]

Likewise, the architecture selected for the new additions to the temple formed a novel counterpoint to the older Hellenistic part. The Zeus-Asclepius temple is a miniature imitation of the Pantheon in Rome, which suggests that it was intended to serve a similar function or to instigate similar reactions. Its large domed roof must have appealed to its visitors, particularly its Roman convalescents, as an embodiment of the very latest Roman architecture.[37] The resemblance between the Pergamene Asclepieion and the Pantheon in Rome implies that the worshippers who arrived in the temple knew of the one in Rome; the building's propaganda

value depended on it. The architectural language enabled the supplicants to place the temple within its appropriate location using a network that was both conceptual and real. Worshippers could travel to the Pergamene Asclepieion over a network of roads and sailing routes. The same network could have easily taken them to Rome. The fact that the Zeus-Asclepius temple was such a celebrated and distinguished building indicates the central role played by the cult of Asclepius in Greco-Roman society at the time.

The testimony of Aelius Aristides depicts the Pergamene Asclepieion as a temple frequented by high-ranking Greek and Roman convalescents, who arrived in the temple from as far away as Rome and Egypt. Aristides' account of the sanatorium calls to mind Thomas Mann's *Magic Mountain:* it attracted his social and intellectual peers from throughout the Greco-Roman world. Also, while recuperating in the Asclepieion, Aristides was able to consult not only the god of medicine himself but a wide variety of physicians, some of whom were among the most renowned of their day. At least two physicians who attended Aristides while in Pergamum are mentioned by name in the *Sacred Tales,* in addition to Satyrus.[38] During the winter of 148 CE, Aristides was severely ill, suffering from a tumor of extraordinary size. His groin was distended and swollen and he was in terrible pain. Although he was at the Pergamene Asclepieion at the same time, Aristides had physicians at his bedside for constant consultation.[39] During the winter of 166 CE, Aristides was again at the Pergamene Asclepieion and saw many dream visions. He reported that during this stay, he consulted a physician named Porphyrio about his dreams.[40] On another occasion, and after a night of incubation in the Pergamene Asclepieion, Aristides summoned the physician Theodotus to help him to interpret his dream, as he often did.[41]

The fragmented narrative of the *Sacred Tales* provides numerous examples of how the Pergamene Asclepieion functioned as a medical center, which attracted patients as well as a great number of health care providers. It formed an important arena of the medical market place. There the sick were guided by the various health care providers in comprehending their ailments. They learned to recognize and qualify the merits of each type of healer and the places in which transactions between these healers and the sick occurred. Other sources show that the city was home to a large number of physicians outside the temple as well. A Pergamene inscription from the reign of Vespasian acknowledged the seminal role of physicians in society and bestowed upon them a wide range of privileges and the right to form a professional association.[42] Three dedications in verse to physicians, including one to a woman, suggest that the dedicators and the recipients were educated.[43] All of

these physicians would have profited from the stream of supplicants who arrived in the city to consult Asclepius but then also made use of the services of a more earthly health care provider.

Furthermore, as has been shown throughout this study, the worshippers who arrived in Pergamum seeking cures for their complaints were unlikely to draw a clear disciplinary distinction between the help physicians and priests could offer them, or between the type of health care that was offered within and outside the temple.[44] Those arriving in the Asclepieia were neither averse to scientific medicine nor likely to hold any clear understanding as to the nature of the human constitution and its ailments.[45] A Pergamene inscription from the first or second century CE recorded a dedication of one Asclepiacos, a physician, to Ma the Invincible.[46] The name Asclepiacos calls to mind the *neocoros* of the Asclepieion of Pergamum at 145 BCE, who was mentioned by Aelius Aristides. Samama has argued that the two should not be confused, because the Asclepiacos mentioned in the *Sacred Tales* was a *neocoros* and not a physician. However, Aristides himself referred to the temple warden with whom he resided while at the Asclepieion at times as a *neocoros* and at times as a physician, thus leaving more room for doubt than Samama allows.[47] Whether the Asclepiacos mentioned in this inscription was the same one whom Aelius Aristides knew cannot be determined with certainty. But the attraction of the Asclepieia, the conglomeration of physicians of various ranks in the cities in which these temples were located, and the reluctance of patients in general to mark the division between physicians and priests, or between medicine and temple healing, made uniting a priest and a physician in the same person a plausible option. The image of a priest who is a physician, and vice versa, is consistent with the sentiments of L. Iulius Helix, whose expression of gratitude toward his physician as well as Asclepius and Hygieia is examined in chapter 2.[48] The manner in which patients understood their ill health confirms that the sick either expected an Asclepiacos or that they were indifferent to the dual nature of his medical authority.[49]

The ascent of the Asclepieia into major medical centers under the High Roman Empire was the result of more than one process. The cult of Asclepius had been popular ever since Asclepius turned from a hero into a deity during the fifth century BCE and the cult became Pan-Hellenic. The climate of the latter half of the second century CE onward, which has been labeled by E. R. Dodds as an age of anxiety, contributed to the appeal of a cult that focused on personal salvation and on the worshippers' bodies.[50] Under the Principate travel was safe and convenient. Roman legislation encouraged the spread of civic centers and the profession of med-

icine within them. The proliferation of benefactions, along with economic prosperity, enabled the new building undertaken in some of the prominent temples of Asclepius. Taken together, circumstances were favorable for turning the temples of Asclepius into prominent *loci* within the health care system, and they encouraged a constant stream of health tourists toward them.

Water

As a medical tourist, Aristides benefited from the curative water of the well that lay within the temple of Asclepius. This was not accidental.[51] According to Plutarch, Asclepius and his followers consciously built their shrines in clean, airy, high places.[52] Vitruvius emphasized the healthy locations of the Asclepieia.[53] In reality, most medical sanctuaries were built around a spring thought to have therapeutic properties.[54] Scholars who have studied the cult of Asclepius have demonstrated that salubrious places were chosen for the cult, that water always played an important role in it, and that especially healthy waters were often found in the sanctuaries.[55] The Athenian Asclepieion had at least two water sources.[56] The Asclepieion in Corinth was established next to the springs of Lerna.[57] In Troezen, the temple of Asclepius stood next to the spring of Heracles, whose water was famous for its minerals.[58] In Messene, the precinct of the Asclepieion included the spring of Arsinoë. A special building was built for this spring during the third century BCE.[59] In Lebena and in Delos, the Asclepieia were built next to springs whose curative water was long renowned.[60] In Acrages, the temple of Asclepius was located on the Gregorius plain, near the meeting point of the Hypsas and Acrages Rivers, where a spring of curative water had been used since archaic times.[61] Croon has listed over thirty hot water springs in Asia Minor alone to which a sanctuary of Asclepius was attached.[62] The main reason for choosing the location for the Epidaurian Asclepieion, for example, must have been the springs there, which were already thought to hold therapeutic attributes in the third millennium BCE.[63]

As Croon also noted, however, before the fourth century BCE, hardly any connections between hot springs and the cult of Asclepius are attested to.[64] The reason is twofold: thermal medicine did not exist prior to this time, and the cult of Asclepius did not become Pan-Hellenic before the fifth century BCE.[65] However, the emergence of thermal spring therapy in Hellenistic and, later, Roman times is consistent with the increase in the popularity of the cult of Asclepius, particularly around hot water springs. The supplicants who arrived in the various Asclepieia were drawn there both by the presence of the god and by the expectation of curative waters. Water had three main functions in the healing temples: (1) initially, the

worshippers were purified by the water; (2) within the rites commonly referred to as iatromatic, water was used in the preliminary rites before oracular dreams were induced; and (3) water was used in the healing sanctuaries as part of a curative regimen.

Hydrotherapy was not exclusive to temple medicine or the cult of Asclepius. To quote Ralph Jackson: "In the Roman world numerous forms of medical treatment were available, administered by a wide range of healers. Many of the treatments were unpleasant; some were dangerous; few were predictably and consistently beneficial. Given this uncertainty and discomfort, it is not difficult to understand why hydrotherapy held such an appeal."[66] Furthermore, hydrotherapy was compatible with Roman habits. In fact, of all ancient peoples, the Romans were most devoted to the habit of bathing. As a rule, the Romans bathed daily and spent a considerable part of their day in a public bath.[67] Roman baths provided a wide variety of activities, such as sports and recreation, massage, personal grooming, and relaxation. Some of the larger spas included educational spaces, such as libraries, lecture theaters, and public areas where works of art were displayed. The centrality of baths and bathing to life during the High Roman Empire led Yegül to conclude that "public baths embodied the ideal Roman way of urban living."[68]

With the exception of temples, public baths were the most popular building type in the Roman world. In fact, by the end of the first century BCE, more than 200 baths existed in Rome alone. By the end of the fourth century CE, Rome had 856 public baths as well as 10 or 11 *thermae,* which were exceptionally large and luxurious complexes.[69] Notably, from the second century BCE, wealthy Romans built public baths as investments.[70] According to Aelius Aristides, the Smyrna of his day "had so many baths that you would be at a loss to know where to bathe."[71] Most city dwellers, who resided in the multistory tenements (*insulae*), had no bathing facilities at home. Attempts by Roman legislators to secure certain standards for the dwellers of the *insulae,* such as the Augustan prohibition of *insulae* smaller than 70 Roman feet, were probably ignored, because the law had to be reissued time and again.[72] The state lacked the means to enforce the observances of its rudimentary building regulations and was reluctant to prosecute landlords when these laws were violated.[73] During the first century BCE, public baths provided refuge from the squalid living conditions commonplace among the poor.[74] Therefore, public baths served a most important hygienic need, even if they brought the occasional danger of spreading diseases.[75]

Attending the baths was seen by contemporaries as essential to the promotion of good health. For instance, Celsus positively referred to baths more than fifty

times in his work on medicine and, as a follower of Asclepiades, advocated the benefits of bathing for keeping healthy.[76] He thought that baths could help those who incurred fatigue or became overheated or chilled.[77] Asclepiades himself was such a keen advocate of water treatment that he earned the nickname the "cold water giver."[78] Indeed, four categories of evidence support this explanation: (1) the recommendations of medical authors to bathe, (2) the comments made by authors who were not professional physicians but nonetheless advocated for the health benefits of baths and bathing, (3) the prevalence of health-related deities in bath decoration (statues of Asclepius and Hygieia were common),[79] and (4) the likelihood that physicians practiced their trade in the vicinity of baths.[80]

Galen repeatedly emphasized the importance of hygiene and bathing.[81] Libanius was ordered by his doctor to take baths.[82] Even the Roman government acknowledged the importance of bathing to the sick and realized the popularity of this habit. A Hadrianic decree allocated certain hours of the day exclusively for the sick to use the baths.[83] Seneca, who disapproved of baths on moral grounds, nevertheless acknowledged their medical value.[84] In addition, physicians habitually recommended some forms of athletic activity prior to bathing.[85] Galen recommended mild forms of exercise, preferably light ball games, which developed all parts of the body.[86] Martial mentioned five categories of ball games played in the palaestra. Considering the testimonies of Galen and Martial together, exercise was clearly perceived to be part of the healthy regimen prescribed by physicians, and it was commonly practiced in the vicinity of baths. Thus, bathhouses functioned both as health centers and as places of instruction on the principles of healthy living. Attending a bath as a therapeutic measure was also apparently a part of the *communis opinio* during the High Roman Empire. The edict of Hadrian confirms that the sick frequented the baths, and, although no epigraphic evidence recorded the activity of physicians within the baths, the conglomeration of so many potential clients in them makes the presence of physicians in areas surrounding the baths an obvious conclusion.[87]

The origins of hydrotherapy can be traced back to Homeric times, and its benefits were praised by the Hippocratic authors.[88] Literary evidence, corroborated by archaeological findings, suggests that the habit of bathing became popular in Rome and Campania between the second and first centuries BCE.[89] Only in the Roman imperial era, however, did hydrotherapy in the form of baths become accessible to the general public. The first century BCE saw a great increase in the use of water treatments. This urban phenomenon was inherently connected with the general adoption in the Roman world of elaborate suites of baths and with a growing

inclination of rich Romans or town councils to build baths for the benefit of the whole community.[90] The emergence of this bath culture was not incongruent with the growing influence of Greek culture on the Roman world. By the time of Augustus, very little difference existed between baths and *gymnasia*. At times, the same establishment could be referred to by both names in inscriptions (*gymnasium* and *balaneion*).[91] Often, an old and traditional *gymnasium* was renovated as a *balaneion,* incorporating the latest heating technology, as was the case at Pergamum, where the baths occupied the west wing of the upper terrace of the Hellenistic *gymnasium*. However, baths and bathing were not foreign to the old Roman culture, and a certain school of scholars sees an inherent connection between the origins of the Roman baths and the traditions of folk medicine in central Italian villages.[92] In fact, public bath building was characteristic of Roman urban culture in the western cities, just as *gymnasia* typified Greek urban cities in the East.[93] Whether or not baths and their medical use were indigenous to the culture of rural Italy, by the time of Augustus, Romans referred to their baths as *balaneae* and *thermae* interchangeably.[94] As the terminology suggests, contemporaries identified the spread of thermal baths—and the culture associated with these institutions—with the impact of Greek culture.[95]

As noted previously, Roman baths were associated with both sickness and health, and here, too, Romans applied Greek knowledge to their own uses.[96] Romans regarded baths not only as places for cleansing and social intercourse but also as medical centers. A considerable proportion of the visitors to the baths came there for medical treatment or advice on dietetics from athletics trainers.[97] According to Celsus, bathing and the use of cold waters was beneficial to the maintenance of good health.[98] In fact, by the time of Celsus, the Romans had developed an elaborate system of bathing designed to produce various effects. Physicians often prescribed sweating, with two ways of eliciting it: either by dry heat or by bath. The dry heat could come from hot sand, which Celsus ascribed to the Laconians[99] or from the oven produced by the Clibanus.[100] Suitable places to undergo sweating also occurred naturally where hot vapors emitted from the ground could be confined within a building. Such a steam room existed in the fashionable resort of Baiae.[101]

The inducement of sweating for medical purposes arose from the humor-based model of human anatomy.[102] Like Hippocrates, Celsus believed that baths could regulate the humoral balance, and he prescribed hydrotherapy for a wide range of illnesses.[103] These treatments were thought to be useful when one of the humors was doing harm inside and had to be dispersed. Celsus's explanation here reveals how influential Greek medical thought was during the High Roman Empire and

how embedded it was even in the most mundane of daily habits. In this respect, no difference exists in approach among Celsus, Soranus, Pliny the Elder, Frontinus, and Vitruvius.[104] Thus, the system practiced in the Roman bathhouses taught the visitors certain notions concerning health and health care. In this respect, the widespread nature of spas and bathhouses, in which the habit of bathing was executed in a particular fashion and reflected themes of Hippocratic medicine, functioned as an important arena of the Greco-Roman health care system.

Hydrotherapy, as it was practiced in the Roman world, was based on an understanding of the human body that can be traced back to Hippocratic medicine, particularly the influential Hippocratic treatise *On Airs, Waters, and Places,* which was still influential in Celsus's day. The same understanding of the effects of certain waters on the human constitution can be seen in the descriptions of the mineral waters in Baiae and Cumae, the Thermae Neronianae, sulfur baths on the bay of Campania, the Simbruine springs in the district of Simbuvium near Tivoli,[105] and those at Cutilia, which were extremely cold and biting because of the presence of the carbonic acid gas that lay between the Via Nomentana and the Via Salaria.[106] Certain places were renowned for the therapeutic prowess of their waters, such as Aquae Cutiliae, near Rome, and Aquae Albulae, between Rome and Tivoli.[107] All these places were deemed beneficial to the sick. The therapeutic value of certain waters was not merely a notion held by doctors and medical authors. The constant stream of health tourists who flocked to these sites proves that taking the waters was a widely practiced therapeutic measure.

According to Pliny, "Everywhere in many lands gush forth beneficent waters, here cold, there hot, there both, as among the Tarbelli, an Aquitanian tribe, and in the Pyrenees, with only a short distance separating the two, in some places tepid and lukewarm, promising relief to the sick and bursting forth to help only men of all the animals."[108] Pliny's habit of relying on written sources in his works suggests that his comments on hydrotherapy, its efficacy, and the popularity of the locations he mentioned reflected commonly held views. In Pliny's day, major spas were termed *aquae,* of which around a hundred are recorded.[109] Vitruvius and Pliny recognized several classes of thermal and medical springs: sulfur springs, whose waters "refresh muscular weakness and sinews" by heating and burning poisonous humors from the body; alum springs, immersion in which was used as a treatment for paralysis, because their warmth opened the pores and restored health; bitumen springs, which provided draughts to purge and to heal "interior defects"; alkaline springs, whose waters were taken to purge and lessen "scrofulous tumors"; and acid springs, draughts of which were drunk to dissolve bladder stones.

Vitruvius explained that this effect occurred "by nature, because a sharp acid juice is present in the soil, and when water currents pass out of it, they are tinctured with acridity."[110]

Pliny and Celsus also praised the therapeutic attributes of seawater.[111] According to Pliny, the waters of Campania were known to cure barrenness in women and insanity in men.[112] Using such comments, a map emerges of popular routes taken by health tourists, who traveled from the cities in which these writings circulated.[113] This map also attests to the spread of a particular understanding of health-related matters. Such an understanding of the interrelations between the human constitution and the environment, which was itself an inheritance of Greek medical thought, was responsible for sending the sick to convalesce in particular spas where the waters were thought to be therapeutic. Neither Pliny nor Vitruvius was a physician, and their interest in things medical was but a means to an end. Vitruvius used medical theories to explain how to build better buildings and cities, and Pliny collected information from all branches of knowledge, often using medical viewpoints to explain the qualities of certain objects or habits. Their recommendations to convalesce in spas and in resorts should therefore not be taken as innovative or eccentric. Rather, they were more likely to convey the *communis opinio* on such matters than were physicians. Their works implied a flow of health tourists, who traveled from their places of residence to locations where they were advised to take particular waters, and the existence of a flourishing network that carried the repute of these *loci* throughout the Greco-Roman world.

Celsus, who acknowledged Hippocrates as the founding father of medicine, and of the Greeks as the forebears of the discipline, was a keen supporter of hydrotherapy and an important commentator upon the Greek origin of the therapeutic aspects of baths and bathing among the Romans. The frequent references to Asclepiades in Celsus's *De Medicina* emphasize the influence of Greek medicine within the field of Roman health care. Indeed, the reliance of Celsus on the authority of Asclepiades concerning hydrotherapy is merely one example. However, the material reality created by Augustus and future *principes* facilitated the practice of the Hippocratic regimen. Daily bathing, for example, which Celsus thought should be part of a healthy lifestyle, was a reasonable piece of advice to give, because his readership had access to baths.[114] Likewise, Celsus advised the overweight that they should bathe daily, and he believed that they would be able to follow such a command.[115] Moreover, he assumed that a traveler would have access to bathhouses at various stops along his journey—in regions of both hot and cold climate.[116]

Two of Celsus's prescriptions explicitly directed patients to take to the road. For dealing with certain acute diseases, Celsus recommended sweating, a procedure undertaken in a bath or a spa. He specifically mentioned the myrtle groves above Baiae, which suggests that his readers were likely to take such expeditions to Baiae, or other places, for the sole purpose of recuperating.[117] For a wasting disease (*tabes*), particularly of a more serious nature and a true phthisis, Celsus advised a long sea voyage, if the strength of the patient allowed.[118] He advised a change of air, of such a kind that a denser climate should be sought, and he thought the most suitable voyage was the one from Italy to Alexandria. A sea journey was recommended especially for the victims of phthisis, because the rocking would be beneficial.[119] Such guidance would have been inappropriate or even irrelevant if such journeys could not have been undertaken by his readership, even if only the rich could afford it. Celsus was confident that his advice could be implemented. That he was able to make such an assumption was a consequence of the political, economic, and administrative reality of the High Roman Empire. And, although it is true that the readers of Celsus or Pliny were most likely affluent, most of the therapeutic measures Celsus included in his *De Medicina* were not restricted to a particular social tier.

Spas in Italy and elsewhere were popular destinations among those seeking cures from diseases. Patients were expected to stay in a spa for a period of two to three weeks, which meant that, in addition to the bathing facilities themselves, hotels, restaurants, and recreational facilities were needed.[120] Not surprisingly, spas became popular destinations for "health tourists." Baiae, in the bay of Naples, was the most fashionable Roman spa resort from the end of the first century BCE onward, and the town and its surroundings received plenty of visitors throughout Roman times.[121] It was renowned for its idle and luxurious lifestyle, wild parties, and drunken orgies on land or sea. Another seaside spa town was Alliannoi, 20 kilometers northwest of Pergamum. The town was spread out on both banks of the Ilya River with a grid of streets, plazas, exedrae, and nympheae wrapped around numerous baths, cure, and lodging facilities.[122] The proximity to the famous Pergamene Asclepieion must have augmented the popularity of Alliannoi among health tourists. One of those who arrived in Alliannoi to recuperate was Aelius Aristides, who praised its efficacy.[123] Not surprisingly, the appeal of certain types of hydrotherapy influenced trends in medical tourism. After Musa cured Augustus using cold water, rather than the warm water Asclepiades was in the habit of prescribing, the therapeutic habits of the Romans who could afford

it shifted.[124] Pliny recorded the case of Charmis of Marseilles, who took advantage of the fashion for cold-water treatments and persuaded his patients to take such baths even in extreme weather conditions.[125] The noticeable decline in popularity of the *laconicum* and the conversion of the Stabian Baths were probably the direct result of Musa's success.[126] Horace spoke of deserting the myrtle groves and sulfur springs of Baiae for Clusium, Gabii, and the cold springs.[127] Thus, hydrotherapy induced large-scale tourism, which was facilitated by the infrastructure available during the High Roman Empire and contributed to its development. This large-scale tourism indicates a preexisting network of knowledge that encouraged the sick to take to the road. Some of the most prominent agents of this network were authors like Pliny and Celsus, architects like Vitruvius, and physicians like Galen.

Hydrotherapy had been known in the Greek world since the Homeric era. The emergence of Hippocratic medicine on the one hand and the spread of the cult of Asclepius throughout the Greek world on the other, turned bathing into a regular component in the physician's arsenal and into an integral part of the healing centers the Asclepieia were becoming. Either in the cities or in the temples, the baths became important arenas of the medical market place. The sick flocked to them and found healers ready to meet them with authoritative explanations and advice. The political changes that the Greco-Roman world had undergone between the fifth century BCE and the foundation of the Principate allowed hydrotherapy to turn into a seminal treatment option, the baths into healing centers, and the waters of some of the famous spas and temples into magnets that drew those who needed health care from throughout the Greek, Hellenistic, and Roman worlds. The rise of Roman power and the foundation of the Principate—with its *pax Romana,* its favorable disposition to all things Greek, and its inclination toward urbanization—further encouraged the popularity of hydrotherapy. Baths became commonplace in the cities throughout the Roman world. The temples of Asclepius, particularly in the eastern half of the Empire, flourished and attracted worshippers from all corners of Rome's dominion. Greek medicine became the main explanatory model for hydrotherapy, not merely among Greeks but the Romans, too. The political reality facilitated medical tourism. Baths, spas, and temples turned into established centers within a wider network of ideas and practices.

Cities

The main *locus,* however, in which health care was sought and provided was, of course, the city. Cities throughout the Greco-Roman world acted as arenas of the

medical market place. It makes sense to talk about cities in general under the High Roman Empire, because in terms of municipal institutions, architecture, and social and cultural life Roman cities were very similar to Greek ones. When discussing urbanism from Homer to Procopius, from the first age of writing in Greek to the Mediterranean of late antiquity, we speak of "the ancient city," or even "the Greek city."[128] The uniformity of the civic structure throughout classical antiquity is attested to in terms of economy, social structure, and culture. It is also visible architecturally. Moreover, the social structure, which was based on the control of land, was revealed by the civic landscape. Not merely the wealthiest, but also the rest of the citizenry expressed their social status in a visible and public manner, mainly through religious rites, cultural forms of entertainment, military and paramilitary training, and civic institutions. This social structure was maintained by traditional literature, to which only a privileged few had access, and by publicly displayed inscriptions.[129] It is therefore interesting to ask: (1) What were the health-related results of urban living? (2) Were contemporaries aware of these consequences, and what sorts of measures were taken as a result? (3) Did the administration of health care within the cities have a visible manifestation, an allocated arena, and an overall expression in the material culture?

During the High Empire, connections between the various cities under Roman jurisdiction and the center were visually expressed in the form of theaters, bathhouses, and forums as well as civic institutions such as council chambers, record offices, law courts, and temples. The architectural language of all of these was, to a large extent, standardized.[130] Although the surviving medical sources say very little about public health and urban pollution, direct and indirect evidence demonstrates a movement both toward and away from cities caused by health considerations.[131] Such concerns were equally pertinent in the planning of cities. A remarkable level of standardization existed in the provision of certain basic facilities such as public latrines and baths.[132] In addition, the health-related considerations behind the archaeological evidence of sewers, bathhouses, and aqueducts are discussed and explained in works like Vitruvius's treatise on architecture and Frontinus's work on water supply.[133] The uniformity in architectural language, alongside the general modus operandi of visual art during the High Roman Empire as a conveyor of explicit messages, implies that the medical issues considered in the planning of the cities were expressed in a clear fashion through the cities' architecture.

Although, as noted, the surviving medical sources say very little about public health, a substantial amount of evidence demonstrates that such matters were

handled at the highest levels.[134] To begin with, Roman legislators assigned the responsibility of maintaining the cleanliness and good form of the city sewers to the urban praetor: "Curauit autem praetor per haec interdicta, ut cloacae et purgentur et reficiantur, quorum utrumque et ad salubritatem ciuitatium et ad tutelam pertinet: nam et caelum pestilens et ruinas minantur immunditiae cloacarum, si non reficiantur."[135] The importance of a steady supply of fresh water can be further attested to by the caliber of the people who attended this matter. The construction of aqueducts into the big cities, particularly Rome, was a common act of benefaction that could only have been undertaken by the wealthiest of people. In Rome, it was seen as an important enough enterprise to be monopolized by the emperors since the age of Augustus, who appointed a magistrate to attend to the city's water supply. After it was initially overseen by Agrippa in 33 BCE, the administration of the city's water supply was permanently set as a *cura* in 11 BCE.[136] The choice of a highly regarded individual like Messala Corvinus as first *curator aquarum* indicates the importance Augustus assigned to this post. Future emperors were equally attentive to the water supply. In 52 CE, Claudius completed the construction of two additional aqueducts, which added more than 100 miles of water channels and doubled the water supply to the city. Claudius also followed the example of Agrippa by instituting an administrative system for the upkeep of the water system. These monuments stood out in the civic landscape, advertising the emperors' concern for the well-being of the people as well as the importance of hygiene and clean, fresh drinking water to their health.

The best source of information concerning the Roman system of water supply, the nature of the *cura,* and its relevance to health-related matters is the short treatise on this subject composed by S. Iulius Frontinus. Frontinus was a high-ranking magistrate under Domitian, Nerva, and Trajan and an expert in technical and military matters.[137] His first known work, which concerned the art of land surveying (*De agri mensura libri II*), exists only in fragments from quotations in Agennius Urbicus. His two books on land surveying discussed military and legal topics, besides the geodetic issues, and his work was familiar to Aelianus and Vegetius. Frontinus then composed a treatise on stratagems before compiling his two books on aqueducts. In this work, Frontinus meticulously explained the history, capacity, and purpose of the Roman aqueducts. He described close working relations between himself as *curator aquarum* and the emperor. Indeed, the emperor himself nominated the holder of this position.[138]

When Frontinus was appointed water commissioner during the reign of Nerva, he considered it to be a position of great importance, for it was an office that con-

cerned "not merely the convenience but also the health and even the safety of the city and which has always been administered by the most eminent men of our state."[139] According to Frontinus, Romans had long believed that water, particularly spring water, was therapeutic. Frontinus named the water of the springs of the Camenae, of Apollo, and of Juturna as having healing powers.[140] The water commissioner was charged with the upkeep of the waterways into the city.[141] Frontinus stated that the preservation and maintenance of the water supply system was directly responsible for improving the health of the inhabitants.[142] He explained that the quality of the water that could be brought into the city by aqueducts was far better than that which could have been drawn in by private citizens. In addition, part of the responsibility of the *curator aquarum* included the maintenance and running of the civic sewage system, which disposed of wastewater. Frontinus asserted that "the city is cleaner, the air is purer, and the causes of the unwholesome atmosphere, which gave the air of the city so bad a name with the ancients, are now removed."[143] The detailed discussion of drains, their management, and their maintenance in the cities of the Roman world by both private citizens and by the praetor in *Dig.* 43.22.23 indicates that the importance Frontinus attached to civic water management was not uncommon and that it was deemed relevant to health care.

Hygiene in general, and the crucial role of the fresh water supply into the cities in particular, was also advocated by medical authors. For example, Galen noted how water became polluted once a sewer from a city or a large military camp had been poured into it.[144] Oribasius, writing in the fourth century CE, preserved in books 5 and 9 of his *Medical Collections* extracts from first- and second-century CE authors who held very similar views about environmental medicine to Vitruvius in his first book *On Architecture*.[145] Athenaeus of Atteleia, Oribasius's earliest source, noted how the movement of air in cities was obstructed by buildings. The air was thick, enclosed, and, when combined with the exhalations of the city's dwellers, unhealthy.[146] A later medical author, Antyllus, made similar comments, as did Galen in his commentary on Hippocrates' *On Airs, Waters, and Places*.[147] Oribasius also referred to the work of the second-century CE Hippocratic author, Sabinus, who discussed at some length the architectural attributes of a healthy city.[148] His ideal city had straight roads leading in from the suburbs and was oriented north-south and east-west without obstructions.

Sabinus, Antyllus, Galen, Rufus, and Athenaeus were all writing in the Hippocratic tradition of meteorological medicine.[149] The work of Vitruvius (who wrote a short treatise on architecture that he claimed to have handed to the Roman

emperor) shows that such ideas found their way into Roman architecture and civic planning. As noted in chapter 4, these ideas were also advocated by Roman military writers when discussing the positioning of army bases.[150] The office of *curator aquarum* in the city of Rome; the inclination of local benefactors to provide aqueducts, drainage systems, and bathhouses; and the attention of jurists to the urban praetor's responsibility for the drains, all indicate that these civic monuments were associated with healthy city inhabitants. In this respect, the civic landscape during the High Roman Empire should be understood as a powerful agent of the health care system, which had educated the city dwellers about notions of health and illness, and pollution and purity. The civic landscape also defined the particular arenas of the medical market place, such as the bathhouses, the freshwater fountains, the *gymnasium,* the *taberna medica,* and the doctor's villa.

Indeed, the existence of physicians, along with facilities such as *gymnasia* and baths, encouraged the sick to travel to the city to seek medical care. According to Galen, even physicians from other cities came to consult him while residing in Rome.[151] The attraction of the city's healthy environment encouraged Alexander Severus and his troops to move from their encampment near the Euphrates frontier in Northern Syria, where, according to Herodian, they had all fallen ill in the stifling air during the year 232 CE.[152] The troops who had been brought from Illyricum especially suffered, being unaccustomed to the local climate. Because of disease, the army was compelled to retreat to the city of Antioch, where both emperor and troops were revived under the influence of the cool air and good water of the city. Herodian's explanation, which was typical of medical and lay authors, attributed the outbreak's causes to diet and climate. Severus's act was understood by Herodian as an educated attempt to promote the welfare of his men.[153] Both Severus's move into the city and Herodian's explanation of it reveal the widespread belief in causal relations between the environment and the human constitution. Furthermore, this scene illuminates the appeal cities had to the sick and the widespread understanding that they were designed to meet the requirements of public health.[154]

It was not merely the sick, however, who took to the road as medical tourists. Physicians and would-be physicians habitually traveled to the major medical centers of Rome, Ephesus, Smyrna, Pergamum, and Alexandria on quests for medical training. Galen's journey to Alexandria was motivated by the belief that the city was a major center of excellence in scientific medicine.[155] In the course of his visit, Galen had the opportunity to meet many distinguished physicians, such as Numisianus's son, Heraclianus, and the Methodist Julian. He also noted that Alex-

andria was the only place in which physicians used human skeletons to teach anatomy to their students.[156] Galen explicitly stated that the golden age of Ptolemaic Alexandria had been reestablished by Numisianus and other physicians. In reality, renowned medical scholars had worked and studied in Alexandria almost continuously from the time of Herophilus until the age of Galen.[157] Furthermore, Galen was familiar with many of these works even before he arrived there. A rich tradition of philological exegesis of Hippocratic texts since the Hellenistic era existed in Alexandria, and this was carried on in Galen's time by the likes of Numisianus, Pelops, and Julian. Two of Galen's most celebrated contemporaries, Rufus of Ephesus and Soranus of Ephesus, attested that they also underwent a research journey to Alexandria.[158] Inscriptions confirm that physicians from Athens, Cilicia, Pontus, Smyrna, Ephesus, Pergamum, and Syrian Antioch were also present in the city.[159]

One of the main themes that arose from Galen's comments on Alexandria and, later, Rome is that these large cities allowed a level of medical professionalism and expertise that was otherwise impossible. For example, while in Rome, Galen wrote:

> You should not be surprised if, in a great city, the broad scope of the art of medicine causes it to be divided into this large number of sections. For due to its extent, not all doctors can master medicine in its entirety, and in this city, because of its size, all [of the narrow specialists] can make a living. In a small town this obviously is not possible for oculists and for those [specialists] who [only] cut hernias. As far as Rome and Alexandria are concerned, [however,] the number of their inhabitants ensures a livelihood for those who practice any single branch of medicine in those cities, not to mention a livelihood for those who have a broader medical competence than that.[160]

The size of the population in a metropolis like Rome allowed for such specialization. However, even smaller cities had large enough communities of sick people to enable an active medical market, as can be clearly deduced from Aristides' portrayal of Pergamum.[161] Back in Rome, Galen's treatise on prognosis, which was composed circa 178 CE, revealed some of Galen's (successful) attempts to vie with his professional rivals over clients and, more generally, the requirement of any doctor to compete for his patients' trust.

Cities had been home to those engaged in medical trades since classical Greece and continued to be so during the High Roman Empire. With the arrival of the first Greek physician in Rome at the end of the third century BCE (and through the legislation of Julius Caesar, Augustus, and future emperors), the Roman world

adopted the Greek view of medicine as a profession and cities as the main arena in which professional physicians and prospective patients interacted. Furthermore, the prevalence of Greek culture under Roman rule promulgated medicine as part of the Second Sophistic phenomenon and the *agones,* which were an integral part of the civic scenery.[162] The agonistic festivals were but one expression of the competitiveness of Greek culture during the High Roman Empire. It was also seen in the nature of the medical market place (which encouraged physicians and other types of health care providers to compete over potential clients), and the public nature of health care provision turned the civic landscape into an operating theater and a lecture room. In cities, physicians put their skills on display, and the general public had the opportunity to evaluate their ability and even be taught about medical matters.

The Roman world also inherited some forms of health care administration from its Greek and Hellenistic predecessors. In the Hellenistic age, individual cities offered privileges for resident physicians to secure medical services.[163] Such institutions, called either "public physicians" or *archiatroi,* were also present during the High Roman Empire or enjoyed the sanction of the Roman law.[164] The transmission of this tradition to the Roman world is difficult to retrace in detail. Roman legislation from the time of Julius Caesar and Augustus encouraged Greek physicians to migrate to Rome by luring them with a Roman citizenship and tax immunities.[165] Inscriptions confirm that the notion of the *archiatros* was commonplace throughout the Roman world. The title of *archiatros* frequently indicated a civic physician of some description and stands for the longer form "*archiatros* of the city."[166] Although no evidence indicates that the term was used to mean "civic physician" prior to 50 CE, Pohl has hypothesized that the *archiatroi* were merely the Hellenistic public physicians (δημόσιοι ἰατρόι) under another name.[167] Cohn-Haft has compellingly argued, however, that the term "public physicians" received a more concrete meaning during the reign of Antoninus Pius, taking the meaning of one of the physicians exempt from civic liturgies.[168] A second-century CE inscription from Aphrodisias makes the connection between the *archiatros* and his city explicit: ἀρχιατρὸς πόλεως.[169] Another inscription from Aphrodisias, this one of the third century CE, shows that an *archiatros* could have been of an equestrian rank (ἱππικὸν ἀρχιατρὸν).[170] Corroborative evidence shows that wealthy civic physicians who enjoyed high social standing were not uncommon in the eastern cities of the Roman Empire.[171] Taken together, the adaptation of the Greek and Hellenistic arrangement of medical care within a civic context turned the Roman cities into places where medical standards were high.

In the Hellenistic kingdoms, the term *archiatros* was originally used to denote a royal physician.[172] The first evidence of an imperial physician bearing the title of *archiatros* is that of C. Stertinius Xenophon.[173] Xenophon came from a wealthy Coan family and embodied a new type of relationship between a physician and his city, which became possible under the *principes.* After serving as the personal physician of the Roman emperor, he was in a position to become an extremely generous and powerful benefactor to his native Cos. Xenophon's Coan practice secured him 500,000 sesterces annually, which must have meant that his clientele extended beyond the Coan population.[174] In Cos, his image was celebrated on coins and in many inscriptions commemorating his benefactions, such as securing the city's freedom from Roman tribute. As a benefactor, Xenophon provided Cos with new buildings, a library, and bathhouses with improved plumbing.[175]

Karl-Heinz Below linked the growth of *archiatroi* to the development of the legal privileges given by the Roman imperial government to physicians.[176] Nutton has argued convincingly that the increased use of the title of *archiatros* in inscriptions from the middle of the second century CE onward suggests that it must have referred to those physicians whom Pius exempted from liturgies.[177] Furthermore, the *archiatroi* from Lesbos and Sidyna specifically mention their immunity.[178] Ulpian, in his treatise on the duties of a *curator reipublicae,* allowed salaries awarded by a decree of the town council as long as they were given for liberal arts or for medicine.[179] Thus, the administration of health care within the cities under the Roman Empire was an amalgamation of Greek institutions and titles, sophistic culture, and Roman power. Physicians, predominantly of Greek origin, operated in the city under the guise of Greek traditional titles. These titles, however, could only have been meaningful after having secured the approval of the Roman authorities. Therefore, although no official license existed, approval of title did. Similarly, the ability of certain physicians to act as benefactors to their cities was only made possible by Roman endorsement of this mode of Greek culture. The *archiatros,* for example, remained an important civic institution because it referred to those physicians in each city who were entitled to privileges.[180]

Another means of attracting physicians and patients into the cities was the regular participation of physicians in festivals and competitions, where they displayed their skills and expertise. Evidence shows that physicians participated in the *agones* associated with the Grand Asclepieia in Ephesus. An inscription from 153/4 CE records one Cornelius Varinus Demetrius, an *archon* of the *collegium* of physicians, who won the competition.[181] It was not an exceptional event. During the reign of Antoninus Pius, a physician by the name of T. Claudius Demostratus

Caelianus was an *archiatros,* victorious at the great Asclepieia, and winner of the physicians' prize.[182] *Agones* included four categories of medical competitions: surgery, medical instruments, composition, and problems (*problemata*).[183] In the context of the Second Sophistic, the word *problemata* referred to a topic proposed by the audience for improvised argument.[184] This use of the word implies both a social and cultural affinity between the sophists and physicians who performed in the *agones,* and, as in the case of the sophistic competitions, that the audience chose the winner. The category of surgery might have included live demonstrations; unfortunately, no evidence exists on these medical competitions besides inscriptions recording the victors of each category. However, as a number of inscriptions indicate, the physicians were also connected to another civic institution, the museum (τοῖς ἀπὸ τοῦ Μουσείου [ἰατροῖς]).[185]

The city of Pergamum was an example of the centrality of the civic arena in the context of the Greco-Roman health care system. As for many other Greek cities, the decline of the Roman Republic and the foundation of the Principate marked a turning point in the history of Pergamum. After large parts of the city were damaged or destroyed during the first century BCE, the city was restored, but not without Roman assistance. Caesar assigned several communities the duty of collecting the taxes levied by Rome, substituting the payment of definite amounts for the old tax farming system. This method was then built upon by Augustus, who introduced a system based on a periodic census that enabled the communities to determine the amounts to be collected. This new organization eliminated the uncertainties and burdens of the previous system, which was based on levies by the *publicani*.[186] In turn, the cities of Asia Minor were able to prosper and achieve prominence within the Empire.[187] With the establishment of the Principate, the *pax Romana,* and the warm approval of Greek culture by the new regime, the city of Pergamum was able to flourish and to sustain its Greek identity by harking back to the golden age of Greek history.

In addition to the general trends shaping the health care system during the High Roman Empire, two aspects were crucial for turning Pergamum into a medical center: the rise of sophistic culture and the Pergamene Asclepieion. The affinity between Greek civic culture under the High Roman Empire and the rise of some physicians is best demonstrated in the figure of Galen, who was born in the city in 129 CE.[188] The principal source for Galen's life is his own vast corpus of work. Galen was born in Pergamum to an intellectually accomplished family. His father and grandfather were architects, with a vast knowledge of geometry and mathe-

matics, while Galen's great-grandfather was an expert in geometry.[189] Galen's unmistakable aristocratic origin does not explain his choice of a career in medicine, insofar as physicians rarely came from such a privileged background.[190] After an initial education at home under the auspices of his father, which gave Galen a basic training in geometry, mathematics, architecture, astronomy, and grammar, Galen was taught by leading scholars in Pergamum.[191] He began his medical training at the relatively late age of sixteen.[192] In Pergamum, the young Galen had the opportunity to study under some of the most distinguished physicians of his age, such as the Empiricist Aischrion; Stratonicus, who was a student of Sabinus and whom Galen depicted as a pure Hippocratic; and Satyrus, who was the teacher of Galen, the physician of Aelius Aristides, and a student of Quintus.[193] The name of Aiphicianus should also probably be added to this list.[194]

Galen remained in Pergamum until his father's death, when he was twenty (149 CE), before leaving the city to extend his studies in Smyrna, Corinth, and Alexandria. Galen did, however, return to Pergamum almost a decade later (157 CE) to take his first position as the physician of the gladiators.[195] He continued in this position, with great success, under the auspices of five consecutive high priests, who each served for a period of one year.[196] The gladiatorial fights were part of the imperial cult and were practiced in various cities, most likely organized by the great priest.[197] Attending to the gladiators was an important task; because of their training and skill, gladiators were extremely costly. Although medical texts illustrate some of the injuries gladiators might sustain in combat, they also show that trainers were attentive to their care. In addition to Galen, Scribonius Largus mentioned cases involving gladiators, and inscriptions confirm that physicians were present at least in the larger *ludi*.[198] Thus, the same civic culture that had given rise to the ruler cult and allowed the survival of Greek identity, also brought about the *ludi,* which necessitated the presence of physicians.

Perhaps the most important epigraphic evidence concerning the place of physicians in Pergamene society, though, and the role of the Roman government in shaping it, is a constitution of Vespasian protecting physicians, which was made in 74 CE. The imperial text acknowledged the seminal role of physicians and medical assistants in offering medical help and, in consequence, ordered that they should neither have others quartered upon them nor be asked to contribute to extraordinary levies. This constitution was pertinent to the entire Roman Empire. Vespasian stated that anyone who mistreated physicians, instructors, or medical assistants would be severely punished.[199] The content of this inscription is

supported by *Dig.* 50.4.18.30. Therefore, this constitution did not merely recognize that the Asclepiadae formed a legitimate *collegium,* but it protected it in the Roman court.[200]

A city like Pergamum offered a wide spectrum of health services: a renowned Asclepieion; public bathhouses; available physicians; and medical activities, such as *agones,* public lectures, and displays of skills, which enabled patients to examine the quality of their prospective healers. All of these elements combined to ensure the attractiveness of cities as locations of health care.

Conclusion

Travelers to temples, spas and baths, or cities made their journeys for diverse and complex reasons and included a range of different people. For example, people traveling to the Pergamene Asclepieion included Greek intellectuals and high-ranking Romans as well as individuals of a more humble background, whose memory is preserved in the *iamata.* Visitors to spas and baths were regularly attracted by the therapeutic repute of the waters, which were often explained and promoted using Hippocratic notions such as the need to restore humoral balance and the meteorological tradition that could be traced back to Hippocrates' *On Airs, Waters, and Places.* But the promise that a god-sent cure might be found there must also have had a strong appeal. The presence of health care providers, in the form of the temple's priests as well as numerous physicians, and the salubrious nature of the temple's setting and water were also attractive, as Aristides' praise of the Asclepieion's well makes clear.[201] What unified the different *loci* discussed here as health tourist destinations, though, was that their appeal to the sick was explained in Greek terms and, to a large extent, relied on Rome's inheritance of Greek (or Hellenistic) notions, practitioners, and institutions.

Although this Greek influence was important, the Roman reality of the High Empire made the existence of these health destinations possible. For instance, the Pergamene Asclepieion was made more famous by the renovations it underwent under Hadrian and by the ease with which news and people could travel; the presence of physicians in the cities was encouraged by Roman legislation; and baths became more accessible to the public. The high level of connectivity during that period was maintained by the Roman roads, secure sailing routes, and, in general, the *pax Romana*. Taken together, medical tourism and the movement of people, materials, and ideas during the High Roman Empire supported and was sustained by a unified health care system.

Conclusion

Health care during the High Empire was a complex phenomenon. The people traveling to temples, spas and baths, or cities in search of a cure, soldiers making use of army physicians, or, indeed, the families of expectant mothers seeking out what their local medical market place could offer and inviting practitioners into their home did so for numerous reasons. Despite this diversity, some unifying features of the health care system of the High Roman Empire have emerged. First, therapeutic authority was constructed on several levels, which included the healer's legal status, reputation, and experience. In the absence of a licensing system, even an official status did not mean that the Roman government or its representative organs vouched for the professional merits of those calling themselves physicians. The title of "physician," much like any other professional affiliation, was essentially self-proclaimed.[1] In addition, those holding official titles, such as public physician, *archiatros,* or military doctor, were not elected by a professional body. Election, much like a private appeal from a patient to a healer, was the result of reputation, which was gained primarily through experience. Thus, patients themselves gave physicians their medical authority.

A second overarching conclusion concerns the effect of the Roman state on the formation of the health care system. Roman prosperity, the Roman legal system, and Roman transport and communication networks made the connectivity seen in health care under the High Empire possible. Roman military superiority—which translated into a series of successful conquests during the Republic and was maintained and extended under the emperors—along with an appreciation of Greek culture (and with this, the Greek physician), enabled one type of health care provision to spread and gain dominance all over the Roman world. The political reality under the High Roman Empire facilitated the constant movement of therapeutic practices, ideas, and personnel. The high level of connectivity also allowed

the sick to travel far and wide in search of a temple, famous physician, or well-known spa. It also allowed physicians to travel to scholarly centers, such as those at Alexandria, Athens, Pergamum, and Rome, in order to extend their skills and spread their knowledge. The role of the Roman army was decisive here. Positioned on the outskirts of the Roman Empire, with roads leading toward its camps, the Roman imperial army extensively promoted the circulation of medical practitioners, knowledge, and *materia medica*. In sum, the movement of ideas and stories, which accounted for the validity of certain treatment options—such as attending a spa, supplicating at an Asclepieion, or consulting a renowned physician—could not have occurred without the political circumstances created under the government of the Roman emperors.[2]

Perhaps the most striking conclusion to emerge from this study, however, is that the division between scientific and temple medicine under the High Empire was not ontological. It was not rooted in the persons who acted as healers, the nature of the therapeutic procedures, or the places in which interaction between patient and healer took place. This ambiguity was maintained despite a clear propensity on the part of Roman institutions (since the arrival of Greek physicians in the city of Rome) to address physicians as a distinctive professional group and to prefer their methods of healing. This Roman tendency was expressed in legislation, which initially encouraged physicians to migrate to Rome, explicitly excluded physicians from the ban on forming a *collegium,* and bestowed privileges upon the members of this professional group under the Principate. The reasons behind the Roman preference for the Greek physician were twofold. First, it resulted from the Roman appreciation of Greek culture during these years, of which medicine was an essential part. Second, it was an outcome of the need for qualified health care providers to serve the professional army that Augustus founded as part of his reorganization of the Roman Republic. In fact, the medical corps in the Roman imperial army was one of the most prominent contributing forces toward the dissemination, canonization, and maintenance of the medical profession—in its Greek form—during the High Roman Empire.

By a change of perspective to the demand side, however, and by including the testimonies of the patients themselves in the analysis of the history of health care under the Roman Empire, it becomes evident that the efforts of the Roman institutions and some prominent physicians of the day did not yield a general understanding of medicine as a scientific system. Patients' portrayal of their medical conditions rarely disclosed a causal connection between symptoms and illness. Furthermore, on the evidence of some physicians, patients were often unaware of

any methodological gulf underlying the practice of different groups of practitioners, despite the patients' familiarity with the various professional titles. In addition, the places where health care was sought (i.e., the home, city centers, spas, baths, and temples) harbored physicians along with other forms of health care providers, such as priests, dream interpreters, root cutters, potion concocters, gymnastic trainers, midwives, and so on. Neither do patient testimonies indicate a widespread dichotomy between the services provided by scientific medicine and its agents and those provided by the gods and their priests. The sick habitually addressed their gratitude to both physicians and deities after recuperation. There was no dichotomy between temple and scientific medicine; those seeking health care during the High Roman Empire did not have to choose between mutually exclusive competing disciplines. Rather, different forms of health care not only coexisted; they also shared a common language.

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NOTES

Introduction

1. On medical education now, see Horstmanshoff (2010).
2. Plin. *HN* 29.12–13.
3. Porter (1985).
4. Frier and Kehoe (2007): 119. See further Furubotn and Richter (1998): 283–319; McMillan (2002): 9–11. On relational contracts, McMillan (2002): 158–69; Macneil (1978): 854–905; Gibbs (2011).
5. Kleinman (1980).
6. Kleinman (1980) 25–26.
7. Geertz (1973) 3–30.
8. Kleinman (1980) 24.
9. Ibid.
10. Nijhuis (1995) 54.
11. Kuhn (1962) 7.
12. Kuhn (1962) 25.
13. Jouanna (1998). Scholarship on the meaning and use of dreams in classical antiquity is vast, cf. Oberhelman (1993); Israelowich (2012) 71–85.
14. Barton (1994). Barton takes this conceptual model from Foucault; cf. *The Birth of the Clinic* and *The Archaeology of Knowledge*. For a study of physiognomy as a science, see Swain and Boys-Stones (2007).
15. Kuhn (1962) 21.
16. Nijhuis (1995) 54.
17. Plin. *HN* 29.18.
18. "[M]ox a saevitia secandi urendique transisse nomen in carnificem et in taedium artem omnesque medicos." Plin. *HN* 29.12–13, following Hemina.
19. Jackson (1988), chap. 4. For the size of the medical corps, see Wilmanns (1987), (1995).
20. *Dig.* 28.2.12 pr.
21. Jackson (1990a), (2005a); Künzl (1982), (1986).
22. Wilmanns (1987).
23. Cf. MacMullen (1966) 163–241, 255–68; Brunt (1975); Isaac (1992) 101–60.
24. Such a network facilitated the flow of ideas as well as people and materials.

CHAPTER ONE: The Identity of Physicians during the High Roman Empire

1. Nutton (2004) 157; Marasco (1995).

2. Nutton (2004); Langslow (1994), (1999), (2000).

3. Cf. the medical jokes of Plautus; Langslow (1999) 183–226.

4. For the role of Celsus in translating Greek medical terminology into Latin, see Langslow (1994).

5. Plin. *HN* 29.12–13.

6. Plin. *HN* 29.12 sqq.

7. Cato says that he has a notebook of recipes "by the aid of which he treated his son, servants, and household." Plin. *HN* 29.15. For a more reserved view, see Nutton (1992) 35–6.

8. "Pestilentia eo anno aliarum rerum otium preabuit. Aedes Apollini pro valetudine populi vota est." Liv. 4.25.3.

9. Graf (1992) 159–203.

10. Val. Max. is the most detailed account, but certain details are added by Ov. *Met.* 15.622 and the anonymous author of *De Viris Illustribus,* 22.1–3. Valerius depends heavily on Livy, but unfortunately his eleventh book now exists almost entirely in an abridgment alone. It is also possible that Valerius drew information from Varro's *Religious Antiquities.*

11. Dion. Hal. 10.53; Below (1953) 2; Nutton (1992) 35–6.

12. Nutton (1981) 18; Jackson (1993) 81.

13. Being a professional physician, both in the Greek and in the Roman world, placed Archagathus into a well-defined social status. Throughout classical antiquity physicians were seen first and foremost as artisans, hence as people who performed physical work (βάναυσοι, or *sordidi*). As such they were the victims of various scornful comments, as the jokes of Plautus reveal; cf. Langslow (1999) 183–226. In classical Greece the workers' bodies were depicted as deformed and diseased (cf. Mem. 2.8; Oec. 4.2f.; cf. Aristot. *Pol.* 1278a; 1337b). The Roman attitude toward paid work was very similar to the Greek. Cicero, for example, thought that all tradesmen performed dirty work and that there could be no freedom in a workshop; Cic. *de Off.* 2.150; D.Chr. *Or.* 7.110 sqq.

14. Cohn-Haft (1956) 48; Nutton (1986) 38.

15. Rostovzeff (1941) 1088–94.

16. Briau (1866); Vercoutre (1880); Pohl (1905); Cohn-Haft (1956).

17. Elected: I.*Cret.* 4.168 (Guarucci, 1950), lines 2–3; I.*Cret.* 2. chap. 3, no. 3, lines 5–6; Hired: *I.Delos* 2.442A, lines 2–3; *Mon. Ant.* 23 (1914) no. 48 (Peribeni and Romanelli), lines 25–6; sent for: Eph. Arch., 1908, pp. 159–94 (Keramopoullos), lines 11–12; *IG* IX, 2 no. 69 (Kern, 1908), line 9; *IG* V, 1 no. 1145 (Koble, 1913), lines 9–11.

18. *IG* I^2 no. 152, line 13; *IG* $2/3^2$.1.1.374, line 18; *IG* $2/3^2$.1.1.772, lines 9–10; Jahrb. 18(1903), Arch. Anz., p. 198, nos. 3, 4; *Syll.*^{3} 943, line 7; AM 51(1926), pp. 28–33, line, 3; *TAM* 2.2.590, lines 5–6, 10.

19. Much of the information now available on Charondas is legendary. He is often associated with Zaleucus, but he lived later, most likely toward the end of the sixth century BCE.

20. Diod. Sic. 12.13.4: ὑπερεβάλετο τοὺς πρότερον νομοθετήσαντας δημοσίῳ μισθῳ τοὺς νοσοῦντας τῶν ἰδιωτῶν ὑπὸ ἰατρῶν θεραπαύεσθαι.

21. Cohn-Haft (1956) 9–10. It is true that Diod. Sic. 1.82.3 speaks of physicians in Ptolemaic Egypt who received their *trophe* from the public hand, but there is no evidence that these were "public" physicians.

22. The only exception to this is a *scholium* to an Aristophanic passage that was written a millennium after Aristophanes composed his comedies, chol. in Ar. *Ach.* 1030.

23. Nutton (1981) 15.

24. Nutton (2004) 140.

25. Massar (2005) 40. Evidence on the ἰατρικόν is scarce, consisting of three inscriptions: *SIG*^{3}, 437; *Ath. Mitt.* XVI, 291–5; *Ath. Mitt.* XVI, 406–9=*SIG*^{3}, 1000=Sokolowski (1969) no. 168, and a dozen papyri: P.*Cairo Zen.* I 59036; *PSI* IV, 371; P.*Hib.* I, 102; *PSI* IV, 388; P.*Tebt.* III/1, 746; P.*Hib.* I, 165; P.*Hib.* I, 103; P.*Petr.* II, 39; P.*Petr.* III, 110–11; P.*Tebt.* III/2, 1036; P.*Tebt.* III/2, 1037; P.*Hamb.* II, 171. The evidence is collected and discussed by Raj (2006) 89–98.

26. Rostovzeff (1941) 1092.

27. Robert (1976) 176–80.

28. *Syll.*^{3}, no. 437, lines, 4–5.

29. Boswinkel (1956) 185–87.

30. For the physician in the classical era, see Edelstein (1967) 67–87; for the Hellenistic period, see Kudlien (1979), Massar (2005).

31. Massar (2005) 18.

32. Cf. Massar (2005) 178.

33. Though none of these biographies survived, fragments of them are quoted by later authors. Cf. Massar (2005) 175–6.

34. For Hermmipus of Beirut, see *FGrHist* IVA7 1061; for Soranus of Ephesus, see *FGrHist* IVA7 1062.

35. I. *Delos* 1525.

36. I.*Eph.* 1162; 4101.

37. Mastrocinque (1995).

38. Diog. Laer. 2. 124.

39. Plut. *Dem.* 38; App. *Syriaca* 59–61; Lucian *De Dea Syria* 17–18; Valerius Maximus 5.7 ext.; Julian *Misopogon* 347–8; for a review of the evidence and the authenticity of this story, see Mastrocinque (1995).

40. Stephanus identified Euridice as the prince's beloved; *Scholia in Hippocraticem et Galenum,* ed. F. R. Dietz (1834) 74–6. Valerius Maximus attributed the diagnosis to the mathematician Lepinus (5.7 ext.), and Pliny has yet another version, but all other sources name Erasistratus as the author of the diagnosis.

41. Polyb. 5.56.

42. A very similar phenomenon can be seen in the realm of religion, particularly revolving the so-called ruler cult. Cf. Price (1984).

43. Civic physicians: Massar (2005) 65–103; royal service: Massar (2005) 103–25.

44. This, of course, does not mean that all physicians belonged to the upper tier of society; that they enjoyed high repute; or that they were part of a Pan-Hellenic circle of diplomats or professionals. Most physicians throughout classical antiquity and beyond were artisans who were trained as apprentices and should be compared with other types of skilled workers.

45. A large number of inscriptions found in Cos record decrees of foreign cities in honor of Coan physicians: Cnossus (Crete)—R. Herzog JDAI 18(1903), Anz., p. 11; *SIG*^{3} 528 (221–19); *Insc. Cret.* i. 88, no. 7 (for Hermias, a Coan doctor sent to Cnossus by the city of Cos); Gortyn (Crete)—L. Laurenzi, Historia 5(1931), pp. 62off. (for the same physician); (*Insc. Cret.* Ii, p. 16. n. 3); Aptera (Crete)—*Insc. Cret.* 2, p. 16, n. 3; Delos—*IG* xi, 4, 1078; *SIG*^{3} 538A.

46. Massar (2005) 123.

47. Massar (2005) 124–50.

48. Str. 181c; *CIL* 2.2348; 12.3342.

49. τοῖς ἰατροῖς καὶ δημοσίᾳ αἱ πόλεις τιμὰς καὶ προεδρίας καὶ ἀτελείας καὶ προνομίας διδόασι. Lucian, *Abdicatus,* 23.

50. τὸ μὲν οὖν κοινόν ἐστιν, ᾧ πάντες ἄνθρωποι χρώμεθα, μάλιστα μὲν ἐν ὑπαίθρῳ, δεύτερον δὲ ἐν οἴκοις μεγάλοις θύρας μεγάλας φωτὸς πλήρεις ἔχουσιν, οἷοι καὶ νῦν κατὰ

πολλὰς τῶν πόλεων δίδονται ἰωμένοις τοῖς ἰατροῖς, οὓς παρωνύμως αὐτῶν ἰατρεῖα προσαγορεύουσι. Gal. *Hipp. Off. Med.* 19=18B, 678K.

51. Nutton (1981) 9; Rosenthal (1975) 35.

52. For an analysis of benefactions in classical antiquity, Veyne (1976) is essential.

53. Nutton (1992) 38 sqq. based on Gummerus (1932) and later additions.

54. Nutton (1992) 39. The lack of inscriptions indicates a low social status, because inscriptions were a common way for the community to bestow status on its members. Absence of inscriptions, therefore, indicates the community did not think the physicians worthy.

55. Nutton (1992) 40–1.

56. For other explanations, see the convincing arguments of Astin (1978) 151–81, 332–40.

57. Below (1953) 2.

58. This argument should not be taken as an attempt to reject the notion of microecologies introduced by Horden and Purcell (2000).

59. Nutton (1986).

60. Polito (1999) 48 opens his article stating that "any list of the most eminent Greek physicians must inevitably include the late Hellenistic doctor Asclepiades of Bithynia."

61. Str. C564; Ps. Gal. *Introduction to Medicine,* 14.683 K; Rawson (1982) 359.

62. Cic. *de Orat.* 1.62 dates Asclepiades' death to ca. 91 BCE. Pliny, although placing Asclepiades' stay in Rome in the time of Pompey, provided no evidence for this late date; Plin. *HN* 26.12–13. It is the view taken by Gourevitch (1987) that a close examination of Pliny produces no grounds for a late dating of Asclepiades' death or stay in Rome.

63. For the theory of Asclepiades, see Vallance (1990), (1993).

64. Rawson (1982) 358.

65. Polito (1999).

66. Rawson (1985) 174.

67. Polito (1999) 63. For Asclepiades' reworking of Erasistratus's physics, see Vallance (1990) 62–79.

68. Massar (2005); Kudlien (1986).

69. Sextus Empiricus, *Against the Logicians,* 1.201–2.

70. Caelius Aurel. *Morb. Acut.* 2.129; Oribasius, *Coll. Med.* iii *CMG* VI. 2. 1 256 R.

71. The importance of rhetoric to physicians, their ability to secure their patients' trust, comes up in Hippoc. *Prog.* The subject is further discussed by Deichgräber (1950) and by Edelstein (1967).

72. Kudlien (1979) 50; Rawson (1985) 364.

73. Rawson (1982) 364.

74. On Pliny's attitude toward Asclepiades, see Gourevitch (1987). Pliny's dating is probably mistaken. Cf. Rawson (1982) 362.

75. Plin. *HN* 26.16–20.

76. Plin. *HN* 7.124.

77. On hydrotherapy in general, see chapter 5.

78. Plin. *HN* 26.14; cf. *Anonymus Londinensis* 24.30.

79. Cels. *Med.* Proo. 8.

80. Celsus can be best described as a *philiatros,* which meant that he probably had some level of practical experience in treating patients and that he was familiar with the medical literature of his day, but he was not a professional physician who treated patients for money. Cf. the discussion in Schulze (1999).

81. Plin. *HN* 26.7–8.

82. Yegül (2010) 2; see below.

83. Cic. ii *Verr.* 3.28.

84. Cic. *Fam.* 13.20.

85. "Quibus autem artibus aut prudentia maior inest aut non mediocris utilitas quaeritur ut medicina, ut architectura, ut doctrina rerum honestarium, eae sunt iis, quorum ordini conveniunt, honestae." Cic. *de Off.* 1.151.

86. Rawson (1985) 85.

87. Varro *de RR* 2.1.21.

88. Cic. *in Pis.* 83.

89. Cic. *ad Atic.* 12.13.1; Hor. *Sat.* 2.3.16.1.

90. Suet. *Caes.* 4.1. It is noteworthy that Artemidorus, Verres' physician, had already become Cornelius Artemidorus. Cic. *in Verr.* 2.3.57.

91. Suet. *Caes.* 82.3.

92. "Pansae quidem adeo suspecta mors fuit, ut Glyco medicus custoditus sit, quasi venenum vulneri indidisset." Suet. *Aug.* 11; Cic. *ad M. Brut.* 1.6.2.

93. Suet. *Gai.* 8.4.

94. The Greek air of the medical profession was still very much present in the time of Pliny the Younger, who commented that it is impossible for a physician to win a public contest without being able to read Greek, Plin. *HN* 29.17(?).

95. Suet. *Caes.* 42.

96. It is noteworthy that Caesar distinguished between physicians and teachers of the *artes liberales.*

97. Suet. *Caes.* 42.1.

98. André (1987) 86–7.

99. Cf. Caes. *Bell. Civ.* 3.57.4, where Caesar describes the measures he took as an attempt to secure "the tranquility of Italy, the peace of the provinces, and safety of the empire."

100. Yavetz (1983) 149 explained the grant of citizenship to physicians, alongside rhetors, *grammatici,* and philosophers, as an attempt to attract more acceptable elements into the city.

101. "Cuncta collegia praeter antiquitus constituta distraxit" (he broke up all societies except those of old standing). Suet. *Caes.* 42.3. Epigraphical evidence shows that during the early period of the Principate there were medical guilds (*collegia medicorum*). One such guild in Rome even had regular quarters of its own. There is also evidence of a secretary of such a professional society; cf. *CIL* IX. 1618; VI. 9566, 29805, with Herzog (1935) and Pohl (1905) 79–81; Keil (1912) 128–38.

102. Lewis (1983) 145.

103. Suet. *Aug.* 42.3; Dio 53.30.3.

104. Suet. *Aug.* 42.3.

105. Suet. *Aug.* 32.1.

106. Römer (1990) 81–8.

107. Preisigke, Wörterbuch s.v. πλῆθος 3.a priesterliche Körperschaft. Ditt 56, 24;71; τὸ π. τῶν ἱερέων. Cf. Teb 310, 4 [II]. Lond 335, 15 [II] b. a guild: Soc 498, 2; 5[III]: π. τῶν ἁλιέων. SB 984[I]: τὸ π. τῶν ἀπὸ τοῦ Ἀρισ·οείτου καθαρουργῶν καὶ πλακουντοποιῶν. Inscriptions: *IG* XII, 1 no 155.6, 156.5 (Rhodes); *IGRom.* 4.1680 (Pergamon); *OGI* 56.24 (Canopus, iii B.C.); *PSI* 5.498.2 (iii B.C.); *OGI* 737 (Memphis, ii B.C.).

108. For discussions of the notion of ἀρχιατρός, cf. Pohl (1905) 25–8; Nutton (1977); Raj (2006) 55–65.

109. Kayser (1994), no. 97, pp. 283–5.

110. Raj (2006) 42 with reference to similar uses of ἐργάζομαι and its cognates, cf. Pl. *Rep.* 347a; *P. Petr.* II, 4(9),1; *SEG* 26, 1976/7, no 891,11. 15–17=*IG* XII, 2 no 108–9; *SEG* 30, 1980, no 1175

with the commentary of Lo Porto, *Medici pitagorini,* pp. 282–8; San Nicolo, *Ägyptisches Vereiswesen,* I, p. 91.

111. P. *Ross.-Georg.* III, 2.

112. Raj (2006) 42.

113. Str. 17.1.8. For the founding of the *Mouseion* in Alexandria, see Fraser (1972) 312–20.

114. It is not beyond dispute whether Caesar passed a law entitled *lex Julia de collegiis,* or simply issued a decree. It is also unclear whether this law or decree was issued in 46 BCE. The only evidence that ascribes Caesar with this piece of legislation is Suet. *Caes.* 42.3. In the absence of a contemporary source, scholars have suggested that Suetonius was confused by the *lex Julia* of Augustus and referred certain remarks to a *lex Julia Caesaris de collegiis.* Yavetz (1983) 85. Suet. *Aug.* 32.1 reveals Augustus's motives behind introducing this law. During the civil wars, armed and violent gangs interfered with public order and threatened the government. Augustus, wishing to eliminate such a threat and using public order as a pretense, introduced this law claiming that the *collegia* posed a threat to the social order. He excluded from this ban some of the more ancient *collegia* and others that he thought posed no threat. Among the latter were the physicians.

115. Dio 53.30.3.

116. Suet. *Aug.* 81 refers explicitly to the therapeutic measure Musa used to cure the *princeps.*

117. Suet. *Aug.* 59. On this physician, see Mischler (1993) 757–85.

118. Dio 53.30.3.

119. Like many of his colleagues in Rome, Musa himself, though a highly renowned physician, was a freedman; Dio 53.30.3. As the name suggests, Antonius Musa was probably a freedman of Marc Anthony.

120. For understanding the legal, social, and cultural aspects of benefactions in classical antiquity, Veyne (1976) is seminal.

121. Bowman (1996a) 344.

122. Ibid.

123. Bowman (1996a) 354–5.

124. Bowersock (1965) 89.

125. Some of the social changes in the Greek world under the rule of the Roman *principes* are discussed in modern studies of the Second Sophistic. Cf. Anderson (1993); Bowersock (1969); Bowie (1970), (1982); Brunt (1994); Puech (2002); Reardon (1971); Schmitz (1997); Swain (1996); Whitmarsh (2001).

126. For the system of rescripts, see Nörr (1981); Honoré (1994) 33–69 and passim.

127. Millar (1983) 77.

128. By the third century CE a physician ascended to the highest of levels. Cf. Nutton (1971a).

129. Millar (1977) 491.

130. The inscription was published by Herzog (1935) and reproduced in McCrum and Woodhead (1961): *Documents of the Flavian Emperors,* no. 458=*FIR.* 1.77=*TAPA* 86 (1955) 348–9. See text and commentary in Oliver (1989), no. 38. The edict also includes instructions as to how to deal with those who abused their privileges. In fact, on the same stone appears another inscription from the reign of Domitian, which records the loss of such privileges of physicians who abused them by taking slave students for money.

131. Lines 3–4. For physicians forming a *collegium licitum,* see the inferences from the inscription published by Römer (1990) with Raj (2006).

132. "Magistris, qui ciuilium munerum vacationem habent, item grammaticis et orationibus et medicis et philosophis, ne hospitem reciperent, a principibus fuisse immuntatem idultam et

diuus Vesp. et diuus Hadr. Rescripserunt" (both the deified Vespasian and the deified Hadrian issued rescripts to the effect that teachers who are released from civic *munera* and grammarians and orators and doctors and philosophers had been granted immunity from billeting by the emperors). Vespasian's attitude toward philosophers, mainly Cynics and Stoics, makes it very difficult to accept the authority of *Dig.* 50.4.18.30 on this point. Herzog was first to warn against accepting the evidence of *Dig.* 50.4.18.30 regarding philosophers as reliable, a line that was later taken by Bowersock and Levick. It is probably with Hadrian that the privilege of μὴ κρίνειν was extended to philosophers, alongside rhetors, grammarians, and physicians; cf. Herzog (1935) 983; Bowersock (1969) 32; Levick (1999) 76.

133. Keil (1932), 80 no. 1.

134. See also Knibbe (1981) 1–10; Bringmann (1983).

135. Knibbe (1981/2) 137.

136. Knibbe (1981) 1–10.

137. Knibbe (1981/2) lines 7–14.

138. Cf. Bowie (1970), (1982); Brunt (1994); Swain (1996); Schmitz (1997); Whitmarsh (2001).

139. Not only did the Greek cities benefit from friendly Roman government, which appreciated their culture. They also profited from the *pax Romana,* which, in their part of the Roman world, was more reality than mere propaganda.

140. I.*Eph.* 946.

141. I.*Eph.* 4101. All inscriptions that associated physicians with a museum relate to individuals of high repute, cf. *SEG* 2 (1924) 332 (an honorary decree from Delphi to two Pergamene physicians, 27 BCE); I.*Delos* 1525 (166–145 BCE); *SEG* 31 (1981) 960 (third century CE); I.*Eph.* vi. no. 2304; Nutton (1977) no. 27 (214–17 CE).

142. These legal experts often had the authority to reply in the name of the emperor (*ius respondendi*).

143. For the role of *rescripta* in the Roman legal system, see Honoré (1994); for the composition of the *Digest* and the place of *rescripta* within it, see Honoré (2010).

144. Cf. Kunkel (1973) 128–31.

145. *Dig.* 27.1.6.7; Herzog (1935) 984.

146. *Dig.* 27.1.6.1–2, 4 (Modestinus).

147. "Reprobari posse medicum a republica, qumvis semel probatus sit" (a physician can be rejected from the community, even if he was formally approved). *Dig.* 50.4.11.3; 27.1.6.6.

148. The nature of the Roman emperor as a reactive figure meant that without an incentive there was no need for a new imperial act of legislation. According to Modestinus, Commodus issued a very explicit edict, with a detailed list explaining what the immunity entailed; *Dig.* 27.1.6.8.

149. *Dig.* 50.9.1; 50.13.1.

150. *Dig.* 27.1.6.4; 50.13.1.

151. *Dig.* 50.9.4.2. The *curator* was expected to curtail frivolous and unnecessary expenditures by a council.

152. For the administration of health care in the Roman army, see chapter 4.

153. This argument was convincingly put forward by Schmitz (1997).

154. Millar (1977) 83–101.

155. *Syll.*^{3} 804.

156. *Syll.*^{3} 803.

157. Millar (1977) 494.

158. Baldwin (1992) 77.

159. Scrib. Larg. 40.

160. Scrib. Larg. 122.

161. Scrib. Larg. 118.

162. "Cum Britanniam peteremus cum deo nostro Caesare." Scrib. Larg. 163.

163. On Caius Julius Callistus, see Plin. *Ep.* 47.9–10; Jos. *AJ* 19.1.10ff.; Tac. *Ann.* 11.29.1ff.; Dio, 59.29.1.

164. This, however, is no proof that Galen actually read Largus's work. It is possible that Galen was reading the original Greek sources used by Largus.

165. See discussion in: Deichgräber (1950) 35, and passim; Edelstein (1967) 319–48; Hamilton (1986).

166. Hamilton (1986) 211.

167. Deichgräber (1950) 866 suggests that the association between medicine and philanthropy may be due to the influence of the Peripatos, but see the reservations of Edelstein (1967) 336.

168. The Greek framework is reaffirmed by the fact that Largus mentions only Greek physicians: Hippocrates, Asclepiades, and Herophilus.

169. "Hippocrates, conditor nostrae professionis, initia disciplinae ab iure iurando tradidit." Largus *Praef.* 5.

170. "Nam sunt et qui sanguinem ex vena sua missum bibant aut de calvaria defuncti terna coclearia sumant per dies triginta. Item ex iecinore gladiatoris iugulati particulam aliquam novies datam consumant. quaeque eiusdem generis sunt, extra medicinae professionem cadunt, quamvis profuisse quibusdam visa sint." Scrib. Larg. 17.

171. Moog and Karenberg have recently discussed the report of several medical authors regarding the consumption of gladiator's blood or liver to cure epileptics. They traced the origins of this habit back to Etruscan funeral rites and demonstrated that it was still in existence during late antiquity; Moog and Karenberg (2003).

172. Cels. 3.23.7.

173. Cels. 2.8.11.

174. Cels. 3.23.7; also Plin. *HN* 28.4.

175. Gal. *De simplicium medicamentorum temperamentis ac facultatibus,* 11.18=Gal. 12, 342 K. While these physicians did not prescribe such treatments themselves, they did report that they could result in positive outcomes. Some physicians actually approved of consulting magicians and thereby making use of their incantations: "alii vero etiam ligamenta probaverunt, et magos adhibendos, atque eorum incantationes" Caelius Aurelianus, *Morb. Chron.* 1.4.

176. In addition, one should bear in mind that any diagnosis of epilepsy (or various other illnesses) mentioned in a classical source should not be automatically understood by a modern reader as either beyond dispute or even as referring to the same illness contemporary science recognizes as epilepsy.

177. On Ulpian, see Honoré (2002).

178. Ulp. 8 de omn. trib.; *Dig.* 50.13.1.3.

179. See, more generally, chapter 2.

180. Cels. *Praef.* 1.

181. "[D]is primum inventores suos adsignavit et caelo dicavit, nec non et hodie multifariam ab oraculis medicina petitur." Plin. *HN* 29.3.

182. See chapter 4.

183. Cf. Galen's comment that in his day the few physicians who were able to produce an accurate prognosis were seen as charlatans; Gal. *Opt. Med.* 1.5 (ed. Boudon-Millot) =1.54 K.

184. "Cleopatrae, quam servatam triumpho magno opere cupiebat, etiam Psyllos admovit, qui venenum ac virus exsugerent, quod perisse morsu aspidis putabatur." Suet. *Aug.* 17.4.

185. The papyrus was first published by Grenfell and Hunt in 1898 as P. *Oxy.* I.40 and later by Hunt and Edgar as *SP.* II 245.

186. *TAM* II, 221, and 910=*IGRR* III, 599, and 733; cf. also *IG* XII 2, 484=*IGRR* IV 116, 2–3, and *TAM* II, 224.

187. κακῶς was translated by Westermann as "ineptly"; Lindsay (1963) 224 translates it as "improperly." Schere, P. *Philad.,* p. 16 writes: "C'est peut-être que tu les mal soingés." Preisigke, *Wörterbuch* s.v. κακός: "du hast sie falsch behandelt (als Artz)." Grenfell and Hunt P. *Oxy.* I.40 translate it as "perhaps your treatment was wrong." Winter (1933) 95 sqq. translates "under false pretences" and "without license," which cannot be an accurate translation, because it is unlikely that physicians were licensed to practice at that time, either in Egypt or anywhere else in the Roman world; cf. Cohn-Haft (1956) 17.

188. Hunt and Edgar offer δημ́σ[ιος τ]ῶν. Cohn-Haft (1956) 69, n. 4, accepted their reading, on the ground that δημοσιεύων is not attested elsewhere in Egypt as a title of a public physician. Youtie (1964), however, makes a strong case for Grenfell and Hunt's reading of δημοσ[ιεύ]ων.

189. Furthermore, the prefects of Egypt relied on local experts, who assisted the prefect with the diverse legal and bureaucratic demands of their post; cf. Bowman (1996b) 681; Philo, *In Flacc.* 3; Brunt (1975).

190. For general evidence of his career, see Stein (1950) 74–6. Ephesus: *CIL* III 431=Dessau, *Inscr. Latinae,* i.1499; Syria: *BCH* 3, 253–4=*IGR* 3.1077.

191. Westermann (1954) 111; M. Aur. *Med.* 8.25.

192. Nutton (2004) 151.

193. Kudlien (1979) 46, 68.

194. I.*Delos* 1525.

195. Kudlien (1979) 32–4; Nutton (2004) 152.

196. Nutton (2004) 152. For the organization of medical care in the New Kingdom, see Jonckheere (1958) 96–8.

197. Nutton (1977).

198. *S.B.* 5216. Cf. Amundsen and Ferngren (1978) 2339; Nutton (1977) 194; Nutton (2004) 1. The earliest attested meaning of *archiatros* is that of a personal physician to a ruler (Nutton [1977] 193). Pohl (1905) 25–8 suggested the Seleucids as the first to have used this title. Pohl's dating, however, is less than certain. Placing the *archiatros* Craterus at the court of Antiochus III is now held to be mistaken. The correct date, which was established by I.*Delos* 1547, shows that Craterus lived in the court of Antiochus IX, approximately eighty years later; Nutton (1977) 193. Evidence for the use of the title *archiatros* during the reign of Antiochus III now rests solely on a reconstructed inscription in honor of Apollophanes: . . . ὑπὲρ [τοῦ ἀρχ]ιατροῦ / [τοῦ] βασίλεως / Ἀπολλοφάνου . . . ; Samama (2003) no. 233=Herrmann *AÖAW* (1970), p. 94, no. 1=*TAM* V, 1. This title was again used in fourth-century CE Egypt. However, scattered usages of this term in Roman times suggest it was not forgotten, although it might have been used in a flattering manner, denoting a great physician. Cf. P.*Oslo* II 53, which is a private letter of the second century CE from Hermoupolis, or a decree in honor of Proculeius Themison in 7 CE Alexandria; *ZPE* (1990) 81–8.

199. The actual meaning of "public physicians" (δημοσίοι ἰατροί) has long been debated among scholars. The title is found in mainland Greece from at least the fifth century BCE onward, where it referred to physicians who received some kind of pay from a city in return for residing in it and securing access to medical care for its inhabitants. In Hellenistic Egypt there is evidence for a tax imposed on all "Greeks," not just settlers, that presumably covered the cost of making medical care affordable. In Egypt, the term "public physicians" does not appear in the papyri before 173 CE (P. *Oxy.* 51). Nanetti (1941) 305 was aware of it but offered no explanation. Boswinkel (1956) 184–5 explains the emergence of the title of "public physician" with Pius's edict that limited the maximum number of exempt physicians in a given town to five, seven, or

ten depending on the city's size (*Dig.* 27.1.6.2). Those who received the immunity were entitled δημοσίοι ἰατροί. Though there is no evidence for this hypothesis, it is highly plausible, as noted by Nutton (2007).

200. As has been noted before, this change was already occurring in the Hellenistic era, see above.

201. Cf. the comments of Galen *On the Order of My Own Books* 1=19.49 K.

202. Keil, J. (1956) *AAWW* xciii: 225–6=*SEG* XVII 527=*Bull. Ep.* (1958) 437, n. 7.

203. *CIG* 2987; *CIG* 3953h; Kei and Premerstin (1911) 39, no. 70=*IGRR* IV 1728.

204. Papyrological evidence from the (late) second, third, and fourth centuries CE is common. Cf. Sudhoff (1909) 242ff. In addition to the evidence collected by Sudhoff, add P. *Oxy.* 3245; P. *Oslo* III, pp. 100–3; XII 1556; *PSI* V 455; Nutton (1977).

205. P. *Oxy.* 1272; P. *Cair. Isid.* 65, 66, 67, 124; *PSI* V, 456; P. *Leit.* 16; P. *Oxy.* 1557; P. *Harr.* II, 192; P. *Oxy.* 896; P. *Oxy.* 3195; P. *Oxy.* 53; Raj (2006) 110.

206. P. *Oslo* III, 95.

207. *BGU* II, 647.

208. This view was taken by Sudhoff (1909) 240 sqq.

209. O. *Oxy.* 2111.

210. P. *Gen.* II, 103.

211. *Dig.* 25.4.10.

212. Rowlandson (1998) 289–91; Hanson (1994) 157–202.

213. P. *Gen.* II, 104.

214. P. *Gen.* II, 103.

215. P. *Oxy.* 2563.

216. P. *Oxy.* 51.

217. P. *Oxy.* 455.

218. P. *Oxy.* 3926; P. *Oxy.* 1556; P. *Princ.* II, 29; P. *Oxy.* 1502; P. *Oslo* III, 96; P. *Oxy.* 3245; P. *Merton* 89; P. *Oxy.* 4122; P. *Oxy.* 3729; *BGU* III, 928; P. *Oxy.* 4441; P. *Oxy.* 896; P. *Oxy.* 52; P. *Oxy.* 3620; P. *Cair. Preis.* 7; P. *Louvre* II, 116; P. *Oxy.* 3195; P. *Oxy.* 4528; P. *SAA* 34; P. *Oxy.* 4370; P. *Oxy.* 4529; P. *Lips.* 42; P. *Rein.* II, 92. Cf. Amundsen and Ferngren (1978).

219. Youtie (1964) 22, n. 8, with evidence.

220. Youtie (1964) 23.

221. Grenfell and Hunt in their introduction to P. *Oxy.* I.40; Youtie (1964) 23.

222. This was also the view of Edgar and Hunt *SP* II p. 171, and of Scherer, *P. Philad.* P. 16; Westermann (1954) *Journ. Egypt. Arch.* 40: 110 sqq.

223. P. *Fay.* 106 ii 6–25=*SP* ii 283.

224. Preisigke s.v. δοκιμάζω gives "to try, examine, test." Cf. *Chr.* I 89, 5 (ii CE); *Gen* 32, 9 (ii CE); *SB* 5343, 52 (ii CE); *Stud* X 259, 4 (iv CE); P. *Fay.* 20.17.

225. The evidence of the papyri shows that the system of apprenticeship was commonplace in Roman Egypt, not merely among physicians. Cf. Lewis (1983) chap. 7.

226. Raj (2006) 109.

227. Lewis (1965) 88.

228. Cf. *Dig.* 50.9.1 (Ulpian); *CJ* 10.53.10; *CT* 13.3.9; Lewis (1965) 88.

229. *Dig.* 50.4.11.2 (Modestinus).

230. "Quibus se librosque suos in aegritudine corporum committant." *Dig.* 50.9.1 (Ulpian).

231. Lewis (1965) 88–9.

232. Iskandar (1988).

233. The fact, noted by Lewis (1983) 152–3, that we know so little of the training process of physicians in Roman Egypt is in itself indicative of how unregulated a variable the way into the medical profession was.

234. *Dig.* 27.1.6.7.

235. Youtie (1964) 26 and passim.

236. I leave this phrase without translation for the moment. The question of whether it should be translated as a "public physician" or as a "known physician" is discussed below.

237. *Dig.* 50.9.1; 50.13.1.

238. Gal. 14.621–3 K=*CMG* V.8.1, pp. 89–93, with Nutton's comments on pp. 178–80.

239. The huge size of the city of Rome was Galen's main reason for disliking it. In *De examinando medico* (p. 47, 6–7 Iskandar) Galen criticized Rome as a city full of gain seekers. In consequence Galen encouraged his friends to rely on their friend's recommendation when choosing a physician.

240. P. *Oxy.* I.51 is the first attestation of the title of "public physician" (δημόσιος ἰατρός). The document itself is a report addressed to the *strategus* of the nome by a public physician, stating that, in accordance with the instructions of the *strategus* to look into the cause of a death that had taken place and present a report, he had visited the house and seen the body. Alan K. Bowman, who edited a later report of a public physician (P. *Oxy.* 3245) comments that documents of this type were not uncommon in the second, third, and fourth centuries CE.

241. Lewis (1965) 513–18.

242. The reading of Edgar and Hunt of δήμοσιος poses yet another problem: if Psasnis was a public physician, which presupposes that this title was already in use in 143 CE, then the case would have already been settled. If Psasnis's native city had bestowed this title upon him and did not revoke it after Pius's edict, then the mere title itself should have ensured Psasnis that the same authorities that granted him this title would fulfill the legal requirements implied by it.

243. Furthermore, as Ludwig Edelstein has demonstrated, this requirement guided the course of action of the Hippocratic physician and his Hellenistic and Roman successors. Having presented his patient with an opportunity to witness his skills and expertise, the craftsman/physician relied on an accurate prognosis as the most effective way to prove to a potential client that he was skillful enough to treat him or her; Edelstein (1967) 87–8.

244. Vall. Pat. 2.114. This was not uncommon; cf. SHA *vit. Alex. Sev.* 47.2 (Alexander Severus) Valerius Maximus, *factorum et dictorum memorabilium* 1.7.1 (Caesar); Orosius, *adversus paganos* 6.18.15 (Caesar); Amm. Marc. 30.6.1 (Valentianus). For further discussion of the administration of health care in the Roman army, see chapter 4.

245. Veg. 3.2.

246. Cf. Ando (2000).

247. *CT* 13.4.1; *CJ* 10.66.1.

248. By this term I refer to the inclination of Roman Republican politicians to appeal to the people in their quest for political power by passing pieces of legislation that were not drawn by the senate but were approved by the people.

CHAPTER TWO: Patients' Understanding of Health and Illness

1. *CIL* VI 19=*ILS* 2194=Haberling 34.

2. For physicians in the Roman army, see Nutton (1970); Davies (1989); Wilmanns (1995).

3. Evidence is extensive. Cf. *CIL* VI 20=*ILS* 2092=Haberling 28.

4. *IG* II^2 772.

5. *IG* II^2 483; cf. Gorrini (2005) 144.

6. *IvP* VIII3, no. 102=Samama (2003), no. 186.

7. See chapter 1 above.

8. An important town in southern Phrygia (modern Gölhisar, formerly Horzun) on the border with Lycia.

9. For the history of this transcription, see Robert *Et. An.* (1938) 385; Samama (2003), no. 274.

10. Robert *Et.An.* (1938) 385.

11. *Studia Pontica* III, p. 38, no. 25=*JÖAI* 27(1932), p. 73, no. 4=Robert *Et.An.* (1938) 385–6=Samama (2003), no. 325=Prétre and Charlier (2009), no. 22.

12. Cf. Str. 12.3.38.

13. Samama (2003) ad loc. Cf. *IG* XIV 892=*IGRR* I 411.

14. For the meaning of this term in Roman times, see chapter 1. This dedication, however, suggests that even a high-ranking physician who bore the title of *archiatros* was not reluctant to treat a patient who was also consulting a deity. From Proclus's dedication there is no evidence that Gordianus the *archiatros* made an attempt to discourage him from appealing to a healing deity or merely to distinguish between the help a physician and a deity could have offered him.

15. Samama (2003), no. 325 ad loc.

16. Van Straten (1981) 65.

17. Mentioned side by side: Pl. *Leg.* 909–10; Herondas IV 11–19; van Straten (1981) 66.

18. Van Straten (1981) 70; for the role of prayer in Greek religious life, see Versnel (1981) 1–64.

19. Van Straten (1981) 70.

20. Pl. *Leg.* 909–10; Herondas IV; Diod. Sic. 5.63; Paus. 2.11.6; 3.26.1; Str. 7.374.

21. Sokolowski, *LSS* 107.

22. See chapter 3.

23. It is possible, however, that some standard types of ex-votos were manufactured and sold near the temple. Together with the fact that most of them were made to fit a convention, the medical information they offer is somewhat limited.

24. Van Straten (1981) 149–50, expressing reservations; Rouse (1902), 212; Roebuck (1951) 114.

25. For a catalogue of existing votive offerings, see van Straten (1981) App. A. Inscriptions listing votive offerings: *IG* II² 1532–7, 1539 listing votive offerings dedicated between the fourth and the third centuries BCE. *IG* II² 4511 is a fragment of a list of dedications to Asclepius. Among the dedicators is C. Iulius Antiochos, who is known to have died in 114–16 CE. Similar inscriptions from Boeotia: *IG* VII 303; *IG* VII 2424; Delos: I.*Delos* 1444.

26. Van Straten (1981) App. A 1.25–1.31.

27. Van Straten (1981) App. A 15.1–118.

28. Van Straten (1981) App. A 22.1–12.

29. Terracotta figures: Tsoutsouros (Inatos, Crete), sanctuary of Eileithyia: Faure, P. (1965): *Fonctions des caverns Crétoises* pp. 90 sqq.; Hadzistelou Price, Th. (1978): *Kourotrophos* fig. 2c.—Pitsà, cave of the Nymphs: *Anc. Dell'Arte Ant.* VI 206 fig. 229.—Kos, Asclepieion (?) van Straten (1981) App. A 30.7.—fragments of a votive relief from Delos sanctuary of Artemis Lochia: Plassart, *AED* XI 293–308, fig. 248; Bruneau *Cultes des Délos* 191.

30. Van Straten (1981) App. A 15.118?, 25e, 30.10.

31. Van Straten (1981) p. 99, n. 174.

32. Hill (1895) 121, no. 6=Robert *Et.An.* (1938), pp. 386–7=Samama (2003), no. 274.

33. *IG* IV² I, 121.

34. Str. 14.2.

35. Plin. *HN* 29.2.2.

36. Note the comment of Aristides that readers who are interested in the prescriptions Asclepius sent him for therapeutic measures should consult his more detailed notes, Arist. *Or.* 48.3–4 K.

37. For the meaning and use of ἰάματα in medical context, see van Brock (1961) 68–9, 97.

38. Gorrini (2005) 138–9.

39. Cf. Hippoc. *Morb. Sacr.*

40. Cf. Ar. *V.* 118.

41. For an authoritative discussion of the Hippocratic treatise *On the Sacred Disease,* see the annotated edition of Jouanna (2003). See also Temkin (1971) 2–27; Grmek (1989) 69–71; Wöhlers (1999); Laskaris (2002). Also relevant are the comments in Hippoc. *Vict.* 87, where the author accepts the validity of prayers alongside medical counseling. Furthermore, he claims to have gained all his knowledge about healthy diet from the god (Hippoc. *Vict.* 93). The two treatises are commonly held to have been written by the same author; cf. Jouanna (1999) 374–5.

42. Nutton (2004) 273. Even when it came to *loci* there was a clear lack of division between places in which particular types of health care were administered. There is clear evidence, for example, that physicians conglomerated near the temples of Asclepius, where potential clients were plenty, and that they regularly treated the supplicants even while in the temple. For evidence, see the comments of Galen and Aelius Aristides in chapter 2 below.

43. Boudon (1994); Gorrini (2005).

44. Petsalis-Diomidis (2010) chap. 5.

45. *IG* IV² I, 121, line 43.

46. *IG* IV² I, 121, line 32.

47. The *lex sacra* was published for the benefit of the supplicants, not the temple staff. Sokolowski (1973) 415(?).

48. Dodds (1951) 104.

49. Gil Renberg collected 1,300 inscriptions (623 in Greek and 677 in Latin) that cite a direct divine communication as the motivation for a dedication or some other undertaking. Renberg (2003) 1–7 and passim; see also Hanson (1980) 1395–1427.

50. Cf. Pelling (1997) 197; Cox Miller (1994) 106–23.

51. Testimonies are collected in Edelstein and Edelstein vol. I (1945) T 414–442.

52. Str. 6.3.9.

53. Lyc. *Alex.* 1050.

54. I.*Delos* 2071, 2072, 2073, 2105, 2110, 2120, 2151, 2619.

55. Περὶ δὲ τῶν τεκμηρίων τῶν ἐν τοῖσιν ὕπνοισιν ὅστις ὀρθῶς ἔγνωκε, μεγάλην ἔχοντα δύναμιν εὑρήσει πρὸς ἅπαντα. Hippoc. *Vict.* 86.

56. Hippoc. *Vict.* 87.

57. Ibid.

58. Von Staden (1989) 307–8.

59. *Fr.* 108 Edelstein/Kidd=Cic. *De Div.* 1.64.

60. Cf. *SVF* III. 605; *SVF* II. 1198.

61. Philo, *De insomniis,* 1.1–2; 2.1–4.

62. Tert. *De anima,* 47.

63. Prudentius, *Cathemerinon liber,* 6.37–40, 73–6, 137–40.

64. Johannes Cassianus, *Collectiones Patrum,* 1.19.

65. St. Aug. *Ep.* 162.5.9.3; *Civ. Dei.* 18.18.2; *De Trinitate,* 11.7.

66. Von Staden (1989) 306–10.

67. Ps. Plut. *Placita Philosophorum* 5.1.2=von Staden T 226a–b; Ps. Gal. *De Historia Philosopha* 106=von Staden T226c.

68. Gal. 6.833 K; Kessels (1969) 422–4.

69. On this author, see Abu Ali (1992).

70. Rufus, *Medical Questions,* 5.

71. Ibid.

72. Although Artemidorus himself was born in Ephesus, he called himself "of Daldis," which was his mother's native city in Lydia. It was Daldis's chief god, Apollo, who encouraged Artemidorus to compose his work on dreams.

73. Price (2004) 233.

74. It is, most likely, the same Maximus of Tyre whose rhetorical works we still have today. Ibid.

75. Artem. 3.66, p. 234 1.4.

76. Price (2004) 233.

77. Artem. 1.1. p. 3. Citations of Artemidorus are by book and chapter numbers, adding the page number from the edition by R. Pack (Leipzig, 1963).

78. Artem. 1.2. p. 4.

79. The Empiricists were a Greek school of physicians founded in about 250 BCE by Philinus of Cos, a disciple of Herophilus. Cf. Nutton, *DNP,* s.v. Empiricists.

80. For a history of Methodism, see Frede (1982), Rubinstein (1985) and Gourevitch (1991).

81. Deichgräber (1965) 288–308 is seminal; see also von Staden (1975) and Price (2004) 246–53.

82. Gal. 15.444 K.

83. Gal. 10.609; 19.59 K. for Galen's life, see Hankinson (2008) 1–34.

84. Gal. 16.223 K.

85. Gal. 16.221–2 K.

86. Galen was commanded to serve as θεραπευτής of Asclepius. Gal. 19. 14 sqq., 17 sqq., 19; 14. 648 sqq.

87. Gal. *Subfiguratio Empirica,* Cp. 10, p. 78 [ed. Deichgräber].

88. Gorrini (2005) 140, with a few exceptions listed in n. 45.

89. Laskaris (2002).

90. Van Straten (1995).

91. Gorrini (2005) 141.

92. Müller (1987).

93. Müller (1987) 213 sqq.

94. Cf. Paus. 1.34.3; Philost. *VA* 2.37.90; *IG* VII 325=Sokolowski (1969) n. 69; Gorrini (2005) 141.

95. Cels. *De Med.* 1.203; Gal. 6.794 K; Dioscorides 2.151.2; Plin. *HN* 20.41 sqq.

96. Evidence collected and discussed by Müller (1987) 215–7.

97. Cels. *De Med.* 2.27; Gal. 12.97 K.

98. Plin. *HN* 20.43.

99. *IC* I XVII, no. 9.

100. The description of Demandrus as ἰσχιαλγικὸν γενόενον is very specific.

101. For the history of surgery in the Greco-Roman world, see Jackson (1988), chap. 4; (1990a), (2005a); Künzl (1982), (1986); Scarborough (2010).

102. *IG* IV² 1, 121, fourth century BCE, and Müller *Chiron* 17(1987), second century CE.

103. *IG* IV² I, 121, lines, 33–41.

104. Prétre and Charlier (2009) 36.

105. Dain, A., *Le "Phillétaeros' attributé à Hédrien,"* sec. 279, 1.1.

106. *IC* I, xvii, no. 17.

107. See chapter 1 above.

108. Gal. *On Examining the Physician* 10.1: *CMG* Suppl. Or. 4.116–7.

109. *Insc. Cret.* I, xvii, no. 18.

110. Orib. 2.13; Plin. *HN* 20.49.

111. Dioscorides, 2.123; Orib. 1.6; 4.7–8.

112. Plin. *HN* 21.83.

113. Orib. 1.49.

114. Orib. 1.39.

115. Cels. *De. Med.* 4.4.4; Prêtre and Charlier (2009) 144–9.

116. Cels. *De Med.* 5.15–17.

117. The resemblance between the prescriptions of physicians and gods also indicates that the language of medicine was so powerful that patients habitually employed it when conceiving of their illnesses, even in the temple setting.

118. *CIL* VI 68=*ILS* 3513. In his study of illness and cures in the propitiatory inscriptions of Lydia and Phrygia, Angelos Chaniotis has noted that "in half of the propitiatory inscriptions which permit an insight into the nature of the illness the afflicted organs were the eyes," Chaniotis (1995) 327 with reference to *TAM* V.1 332, 347, 349, 354, 586, 598; van Straten (1981) 139 no. 49.1, 140 no. 49.7; Malay (1985) 120 no. 28, 123 no. 50; Sardis VII no. 97.

119. The Bona Dea was a popular deity particularly associated with healing. Cf. *CIL* VI 73, 75; *RE* s.v. Bona Dea, cols. 686 sqq.

120. See below, chapter 2.

121. ὀφθαλμὼ γάρ τις ἐνόσει. εἶτα ἐπιστὰς ὅδε λέγει ὄξει λύσαντα κάρπου πιμελὴν κᾆτα ὑπαλείψασθαι. ὃ δὲ κοινοῦται τῷ συνήθει ἰαρῷ. ὃ δὲ επειρᾶτο τὰς αἰτίας λέγειν· τὸ μὲν γὰρ συστέλλειν τὸ οἴδημα τῇ δριμύτητι, τὸ δὲ ἐπιλιπαίνειν καὶ ἡσυχῆ ὑποτρέφειν ὁ ἔρων ἔλεγε. Aelianus, *Fr.* 100.

122. Epict. 4.8.28–9.

123. Aristid. *Or.* 48.8 K.

124. For a similar claim, cf. Cels. *Med.* Praef. 1–4.

125. οὕτως ἐν Ἀσκληπιῶ μὲν τὰ νοσήματα τοῖς θέιοις ὀνείροις παύεται· διὰ δὲ τὴν τάξιν τῶν νύκτωρ ἐπιφανειῶν *ἡ ἰατρικὴ τέχνη* συνῆστη ἀπὸ τῶν ἱερῶν ὀνειράτων. Iamblichus, *de Mysteriis,* 3.3.

126. πάνυ διετέλει τε περὶ ἐμοῦ λέγων ἀεὶ, καθάπερ οἶσθα καὶ σὺ, τῶν μὲν ἰατρῶν πρῶτον εἶναι, τῶν δὲ φιλοσόφων μόνον. Gal. *On Prog.* 11.8=xiv. 660 K.

127. This is not to say that they could not tell the difference between a physician and a priest or a god. The fact that this difference was not in methodology or rationale does not mean that there was no difference.

128. οἱ δὲ καὶ περὶ τοῦτο τὸ μέρος τῆς τέχνης ἐπὶ τοσοῦτον ἐσπουδάκασιν, ὥστ,' εἴ τις αἱμορραγίαν ἢ ἱδρῶτα προείποι, γόητά τε καὶ παραδοξολόγον ἀποκαλοῦσιν. Gal. i.54 K. By writing this, Galen also marked the methodological gulf he recognized between divination and medicine, and between the practitioners of these disciplines, i.e., physicians and magicians.

129. Kollesch (1981); Swain (1996) 357–79.

130. Gal. 13.599–600; 17b. 567 K.

131. Gal. *Subfiguratio Empirica,* Cp. 10, p. 78 [ed. Deichgräber].

132. Cf. Orib. 15.30.10–14.

133. Gal. *De sanitate tuenda,* 1.8.19–21.

134. Gal. *Opt.Med.Cogn.* 1.2 [*CMG* Suppl. Or. IV ed. Iskandar].

135. Gal. *Opt.Med.Cogn.* 1.4 [*CMG* Suppl. Or. IV ed. Iskandar]. Here, too, Galen's predicament should be taken as polemic rather than as a conclusion of his historical study on the shift in the habits of patients from the time of Hippocrates to his own day.

136. Gal. *Opt.Med.Cogn.* 1.4 [*CMG* Suppl. Or. IV ed. Iskandar]. This predicament should, of course, be taken as evidence of the popularity of the cult of Asclepius under the Roman Empire. For the number of temples built during the second century CE, see Lane Fox (1986) 160 sqq.

137. Gal. *Opt.Med.Cogn.* 1.2 [*CMG* Suppl. Or. IV ed. Iskandar], 1.5. This predicament is also polemic. In fact, Galen himself argued elsewhere that relying on the collective experience of patients is the best mechanism of ensuring the quality of physicians: Gal. 14.621–3 K=*CMG*

V.8.1, pp. 89–93, with Nutton's comments on pp. 178–80. This view was also taken by the Roman legislator, which sanctioned local governing institutions to choose their physicians without any requirement of formal training.

138. Gal. *Opt.Med.Cogn.* 1.2 [CMG Suppl. Or. IV ed. Iskandar] 1.6.

139. Gal. *Opt.Med.Cogn.* 1.2 [CMG Suppl. Or. IV ed. Iskandar], 4.1.2.

140. *On Prog.* 7.6=xiv. 637 K.

141. "I too was in the habit of saying to others, as you well know, when you said such a thing [i.e., prognosis] that the unskilled say that it is impossible that such a thing of yours [prognosis] can be inferred from the theories of medicine." *On Prog.* 7.7=xiv 637 K.

142. *On Prog.* 1.6=xiv. 601 K.

143. Cumont, F. *L'Égypte des astrologues,* 173; with the comments of Peter Parsons to the text of P. *Oxy.* 3078.

144. For the social and religious background of Aristides' *Sacred Tales,* see Israelowich (2012).

145. Behr (1994) 1140–55.

146. Eudaimon: Philost. *VS* 581; *Prolegomena ad Aristidem* 737D; Suda s.v. Aristides names Eudaimon as a philosopher and priest.

147. At the age of fifteen Aristides began his studies under the auspices of the grammarian Alexander (Aristid. *Or.* 32.2, 38–40 K). Aristides then attended the lectures of Antonius Polemo in Smyrna and then studied under T. Claudius Aristocles. Finally, Aristides traveled to Athens to be taught by T. Claudius Atticus Herodes. Philostr. *VS* 581; Suda s.v. Aristides.

148. Behr (1968) 20–1.

149. Aristid. *Or.* 48.5–7 K.

150. Aristid. *Or.* 48.7 K.

151. On the *Sacred Tales* as an autobiography, see Misch (1950) 498; Boulanger (1923) 163; Dodds (1965) 41–5; Behr (1968) 23; Bompaire (1993); Quet (1993); Reardon (1993); Weiss (1998); Harrison (2000/1); Petsalis-Diomidis (2006).

152. Ancient readers of the *Sacred Tales* included Philostratus (*VS* 586), Sopater (*Prolegomena* 738D), Libanius (*Ep.* 1534.3), and Synesius (Synesius, *De Insomniis,* 18.2–3). For the epigraphical evidence, see Puech (2002).

153. The *Sacred Tales* was certainly published after 170 CE, possibly in 170/1, the date given by Charles Behr, although Charles Weiss has suggested 175–6 CE as a more plausible date of publication; Behr (1968) and (1994); Weiss (1998) 37–46. The crucial piece of evidence is the identity of the Salvius mentioned at *Or.* 48.9 K. Events from March 171 are the latest to have been included in the *Sacred Tales;* Aristid. *Or.* 47.59; 49.34–6; 50.30; 50.68–9 K. The project of compiling the *Sacred Tales* itself was instigated by a dream Asclepius sent Aristides in the late 160s; Aristid. *Or.* 48.2 K; Bompaire (1993) 199. Behr dated this dream to 166 CE (1981–6) ad loc. The first *Sacred Tale* appears to have been antecedent. The additional five soon followed; Bompaire (1993) 199. It is possible that Aristides began with a more modest work in mind, maybe in the form of a eulogy to Asclepius, of the kind that was often found in the temples of the god. The work expanded, however, and Aristides evidently embarked on a more ambitious plan, to describe as many events as he could in regard to Asclepius's assistance to improve his health. But, as Weiss suggested, the actual date of publication might have been a few years later than the last events recorded, if his reading of *Or.* 48.9 is accurate and the Salvius Aristides referred to as a consul was P. Salvius Julianus. Neither Behr's suggested date of publication as 170–1 CE, nor Weiss's hypothesis is beyond dispute. Aristides himself referred to the *Sacred Tales* in his encomium *Address Regarding Asclepius* (*Or.* 42.10 K), which means that by the time the speech was delivered (in January 177 CE) the *Sacred Tales* was already in circulation.

154. Israelowich (2012) 11; for a history of pagan religion during this period, see Lane Fox (1986) 64–101; Beard, North, and Price vol. I (1998) 211–312; Liebeschuetz (2000).

155. Language and Atticism: Swain (1996) 17–64. Aristides was renowned for his pure Attic style in late antiquity and early Byzantine era, which explains why so many of his works survived; Swain (1996) 254; Schmid (1887–97) ii 7 n. 14, 14; Boulanger (1923) 452–7. Dreams: Price (2004) is seminal. For the changes in religious climate, see Liebeschuetz (2000) 1001–8.

156. According to Philostratus, Aristides was ill since childhood, and two centuries later Sopater added that the nature of this childhood illness was epilepsy, Philostr. *VS* 582; Sopater *Prolegomena* 738D ed. Lenz (1959) 112.

157. Aristid. *Or.* 48. 63 K.

158. Returning home: Aristid. *Or.* 48. 63 K; consulting physicians and gymnastic trainers in Smyrna: Aristid. *Or.* 48. 69 K.

159. καὶ συνῆλθον οἵ τε ἰατροὶ καὶ γυμνασταὶ, καὶ οὔτε βοηθεῖν εἶχον οὔτε ἐγνώριζον τὴν ποικιλίαν τῆς νόσου. Aristid. *Or.* 48. 69 K. (Physicians and gymnastic trainers had neither remedy nor did they understand the complexity of my disease.)

160. Convalescing in hot springs was a common practice in the Greco-Roman world. Cf. Croon (1967); Jackson (1990b), (1992); Ginouvès (1994). Boudon (1994) is an interesting study of the role of water in the prescriptions of Asclepius, according to Galen and Aristides, and Jones (1991) looked into Aristides' characterization of the water in Pergamum.

161. Aristid. *Or.* 47. 4 K.

162. The *Sacred Tales* records more than 130 dreams and the actions they instigated. I discuss these episodes in detail in Israelowich (2012) 105–36.

163. Aristid. *Or.* 49. 16–17 K.

164. Aristid. *Or.* 49. 20 K.

165. Aristid. *Or.* 47. 67 K.

166. Cf. Aristid. *Or.* 47. 57 K.

167. Horstmanshoff points out that in Epidaurus the god operates directly, while in the *Sacred Tales* many of the actual therapeutic measures are either executed by priests or physicians or merely interpreted by them; Horstmanshoff (2004) 325. However, the most reasonable explanation to this difference is that the two texts are completely different. Likewise, in the Epidaurian inscriptions physicians are rarely mentioned, while in the *Sacred Tales* they constantly appear. All that can be learned from this is that patients must have drawn very little distinction between temple medicine and scientific medicine, let alone between the agents of the two.

168. Cf. Aristid. *Or.* 48.20 K: "when the divine manifestation was announced [i.e., the prescriptions Asclepius sent Aristides via dreams] friends escorted us with various doctors, some of them acquaintances . . . there was a certain Heracleion, a doctor, a companion of ours . . . "

169. Aristid. *Or.* 48.30–3 K.

170. Aristid. *Or.* 50.38 K.

171. Aristid. *Or.* 48.42 K.

172. Aristid. Or. 49.8–10 K.

173. Ibid.

174. There is no evidence suggesting that physicians who practiced in an Asclepieion were more prone toward its cult. In the absence of such evidence, a safer hypothesis, I think, would be to assume that physicians practiced in the temples of Asclepius, because that is where their potential clients were.

175. Asclepiacos as a doctor: Aristid. *Or.* 49. 25 K (Ἀσκληπιακὸν τὸν ἰατρὸν); as a priest: cf. Aristid. *Or.* 49.22 K (ὁ νεωκόρος <ὁ> Ἀσκληπιακός). Nutton (1985) 47 claims that Asclepiacos was primarily a physician who also acted as one of the dream interpreters in the Pergamene Asclepieion. Aristides' views and behavior were not eccentric. All physicians, excluding Methodists, acknowledged the possibility of divine healing; cf. Edelstein (1937) 201–46;

Kudlien (1968) 1–20; Nutton (1985) 46. In addition to Asclepiacos, who functioned as a priest as well as a physician, there was an aged physician who aspired to replace Alexander of Abonuteichos as a priest of his shrine, and even Galen himself was a devotee of Asclepius; Lucian, *Alex.* 60. On Galen's religious beliefs, see Kudlien (1981) 117–30; Frede (2003). The ancient physicians themselves were aware of the abilities of other kinds of healers. Scribonius Largus, for example, in the introduction to his *Compositions,* noted that some experienced healers are excluded from the medical profession, while others who are not are either incompetent or negligent. Conversely, the therapeutic measures Asclepius prescribed his sick devotees bore great resemblance to those prescribed by lay physicians; Nutton (1985) 46–7.

176. *IG* II² 3798, 3799 with Gorrini (2005) 145–6.
177. Publ. *CIA* add. N. 780; *IG* II², 3798; Aleshire (1989a) 57, 87–8; Samama n. 17.
178. Aleshire (1989a) 187.
179. Aleshire (1989a) 88.
180. *IG* II² 3798, 3799.
181. Aleshire (1989a) 87.
182. *IG* XII, 2 284.
183. See below, chaps. 3–5.
184. Nutton (1985) 46–7.
185. Cf. Gorrini (2005) 143 sqq.
186. Aleshire (1989a) 231.
187. Nutton (1985) 46.
188. Cf. Bates (1995); Amundsen (1996); Grmek (1989).
189. Cf. Good (1994).
190. In this respect it is possible and heuristic to follow the terminology of Kleinman, who spoke of two aspects of sickness. The first, which he called "illness," is a response to a certain physical or psychological symptoms. The second, which Kleinman referred to as "disease" is the reformulation of illness by the healer. Kleinman (1980) 24. The identification and definition of disease is the product of a communal effort.

CHAPTER THREE: The *Domus* and Reproduction

1. Dean-Jones (1994) 212, Thivel (1981) 137.
2. Hanson (1994) 170 sqq.
3. Demand (1994) 167; Flemming (2002) 102.
4. Mattern (2008) 112.
5. King (1986), (1998).
6. All of these are mentioned by Sor. *Gyn.* 3.2.1; 3.29.3; 4.1.2. Cf. Flemming (2000) 115, n. 76.
7. Flemming (2000) 115, with n. 78.
8. Cf. Pliny the Younger's remark that in his day a physician cannot expect to be successful unless he speaks Greek, Plin. *HN* 29.17.
9. See chapter 1 above.
10. Hanson (1994) 196.
11. Flemming (2000) 177; Flemming (2002) 102; Hanson (1990); King (1998).
12. Gellius 4.3.2, 1.6; Treggiari (1991) 3–13; Rawson (2003) 95.
13. Parkin (1992) 123–4; Rawson (2003) 95.
14. For the social role of the nurse in the Roman world, see Bradley (1991) 13–36.
15. Flemming (2000) 163–9.
16. Flemming (2000) 171, with n. 125.
17. Flemming (2000) 171 with references.

18. Scrib. Larg. *Comp. Epist.* 5 and Sor. *Gyn.* 1.60.2–4. For evidence of this debate, cf. John of Alexandria, Commentary on Hippocrates' *On the Nature of the Child* 18=*CMG* xi. 1.4.146.16–32; Theodorus Priscianus *Gynaecia* 6.23 (241.4–15 Rose), Flemming (2000) 169. For a more reserved view concerning the understanding of this Hippocratic interdiction, see Rütten (1997).

19. Flemming (2000) 169.

20. Plin. *HN* 7.43–4. On abortion in classical antiquity, see Kapparis (2002).

21. *Dig.* 48.19.39, 47.11.4; cf. Gardner (1986) 158–9. On vanity and adultery as a basis for abortion, cf. Sen. *Ad Hlev.* 16.3; Gell. 12.1.8; Tac. *Ann.* 14.62–3; Flemming (2000) 169.

22. *Dig.* 48.8.3.2; 48.19.35.5; Flemming (2000) 170.

23. Recipes: Cels. *Med.* 5.21.5, 5.25.13; surgery: 7.29.1–10.

24. Aristid. *Or.* 37.18 K.

25. Pl. *Tht.* 149b–e.

26. Hyg. *Fab.* 274.1–13; cf. King (1986).

27. Hippoc. *Mul.* 1.46, 68.

28. Plin. *HN* 28.23. The question whether the *medicae* or *iatrinai* produced written works is discussed by Flemming (2000) 39–42. Pliny treats female authorities in a similar manner as he treats male authorities: with caution. He accepts a cure for the bite of a rabid dog, which he traced back to a dream of a soldier's mother. However, Pliny was more cautious in accepting the authorities of Salpe, Elephantis, and other female authors; Plin. *HN* 25.6.17–18; Flemming (2000) 134.

29. *Praecogn.* 8.

30. Sor. *Gyn.* 1.1.

31. Sor. *Gyn.* 1.2.

32. For apprenticeship within the medical profession, see above.

33. Sor. *Gyn.* 2.4.1–2; 2.6.5.

34. Sor. *Gyn.* 2.10.1–5; Flemming (2000) 239.

35. Rawson (1991) 12–15; Hanson (1994) 195. But see the convincing critique of Koves-Zulauf of the notion of *tollere infatum.* Koves-Zulauf points out that the recognition of the father and the subsequent acceptance of the newborn into the father's *potestas* might not have necessitated a ritual act of lifting. A minute analysis of the relevant medical and religious texts led Koves-Zulauf to conclude that, although the decision was solely the father's, the actual lifting and the cutting of the cord was done by the midwife, Koves-Zulauf (1990) 1–92.

36. On wet-nursing in Rome, see Bradley (1986).

37. Sor. *Gyn.* 2.19.1–2; 2.20.3

38. Flemming (2000) 359–60.

39. Flemming (2007); see also Parker (2012).

40. *TAM* II, 595; Firatli and Robert (1964) 175, 178; Pleket (1969) 27–8 (no. 12); Benedum (1974); Korpela (1987) 160 (no. 28); Lefkowitz and Fant (1992) 264 (no. 369).

41. Gal. 12.691 K.

42. *Praef.* 2.

43. See chapter 1 above.

44. See chapter 1 above.

45. Parker (1997) 134.

46. For Domnina, cf. Peek (1955) no. 1486; Wilhelm (1977) 100–11; Pleket (1969) 38–9 (no. 26); Firatli and Robert (1964) 175; Lefkowitz and Fant (1992) 265 no. 373; for Aurelia Alexandria Zosime, cf. *IGRR* III. 376.

47. *IGRR* IV. 507.

48. *CIL* VIII 806.

49. *CIL* II 497; *ILS* 7802 (II century CE).
50. *CIL* XIII 2019=Rémy (1984) no. 18.
51. *IG* II^2. 6873. ca. 350 BCE.
52. Pleket (1969) no. 1; Hillert (1990) 77–9; Demand (1994) 63–70; Pomeroy (1978) 496–500.
53. *CIL* II 497; ILS 7802.
54. Demand (1995).
55. Rawson (2003) 101, with references.
56. Rawson (2003) 101–2.
57. Rawson (2003) 102; Demand (1994) chap. 7.
58. *CJ* 6.43.3.1.
59. Similarly, physicians who specialized in one branch of medicine, such as eyes, ears, hernia, etc. were considered physicians, although the need of the jurists to emphasize it proves that this was not self-evident.
60. *Dig.* 50.13.1.2.
61. Flemming (2000) app. 2 collected twenty-nine such inscriptions from Rome, Italy, Gaul, the Iberian Peninsula, Africa, Greece, the Black Sea, and Asia Minor.
62. *CIL* VI 8926=Gummerus no. 59=Korpela no. 176.
63. Gal. 8.414.8; 8.425.1–2 K.
64. Mattern (2008) 73.
65. Gal. *Ven. Sect. Eras. Rom.* 1=11.187–90 K.
66. Gal. *Praecog.* 8=14.641–47 K.
67. Gal. *Loc. Affect.* 6.5=8.420 K.
68. Gal. *Opt. Med. Cogn.* 13.6–8=130–32 Iskandar.
69. Jackson (1988) 87.
70. Sor. *Gyn.* 3.3.
71. Flemming (2000) 360.
72. Seneca, *Letters* 117.30.
73. Gal. 3.3.151 K.
74. Treggiari (1976) 86.
75. Hanson (1994) 158; Helly and Marcillet-Jaubert (1974) 252–6.
76. Hanson (1994) 174.
77. *Dig.* 25.4.1.10, with Rawson (1991) 10–13.
78. *Dig.* 25.4.1.5.
79. *Dig.* 28.2.12 pr; for the legal status of midwives, see below.
80. Pliny claimed that it was a better omen when the mother dies in giving birth to the child. The examples he gave were that of Scipio Africanus and that of the first of the Caesars (i.e., Julius), who, according to Pliny, got the name from the surgical operation performed on his mother. *HN* 7.47.
81. *Dig.* 28.2.4, Ulpian 10; Pomponius 29.11–15; Scaevola on the *lex (Iunia) Velleia* of the year 26. Cf. Gaius, *Institutiones,* 2.132–4.
82. Cf. the *Praetorian Edict Dig.* 25.3–4.
83. Sor. *Gyn.* 2.4–6, 52–55.
84. Jackson (1988) 96 with n. 51.
85. Paul *Sententiae,* 2.24.8–9.
86. Gellius 12.1.1–5.
87. Pelling (1995) 264–76.
88. Cf. Plin. *HN* 25.9–10.
89. Tac. *Dial.* 28.4; *Germ.* 20.1.
90. Sor. *Gyn.* 2.87.

91. Ibid.
92. Sor. *Gyn.* 2.6.
93. Plin. *HN* 28.20.70.
94. *IG* IV², I, no. 121.
95. Ibid.
96. B11. Herzog identified Arybbas with a historical figure. Arybbas was a king of the Molossians, a tribe in Epirus.
97. *IG* IV², I, no. 122.
98. Terracotta figures: Tsoutsouros (Inatos, Crete), sanctuary of Eileithyia: Faure (1965): *Fonctions des caverns Crétoises* p. 90 sqq.; Hadzistelou Price, Th. (1978): *Kourotrophos* fig. 2c.-Pitsà, cave of the Nymphs: *Anc. Dell'Arte Ant.* VI 206 fig. 229.-Kos, Asclepieion (?) van Straten (1981) App. A 30.7.-fragments of a votive relief from Delos sanctuary of Artemis Lochia: Plassart, *AED* XI 293–308, fig. 248; Bruneau *Cultes des Délos* 191.
99. Van Straten (1981) App. A 15.118; 25e; 30.10.
100. Van Straten (1981) p. 99, n. 174.
101. Porter (1985) 175.

CHAPTER FOUR: Health Care in the Roman Army

1. I am borrowing the term "connectivity" from Horden and Purcell (2000).
2. The work of Kleinman, an American physician, psychiatrist, and anthropologist, which emphasized the "inner structure" of health care systems, marked a dichotomy between two aspects of sickness. "Illness" is a response to certain physical or psychological symptoms. "Disease" is the reformulation of illness by the healer.
3. The power of the patient as a paying consumer was for many years a neglected theme in the history of medicine. The groundbreaking work of Roy Porter (1985) 189–92 and passim, which focused on early modern Britain, has provided much stimulus in this work.
4. Vegetius's advice calls to mind various other sources, particularly in regard to the period of the High Empire, from which most of his source material originated. For a discussion of recruitment in the Roman army, see Davies (1989) 3–30.
5. While it is true that Vegetius's work was written as advice rather than as a historical survey, it has a considerable testimonial force in these matters. The *epitoma rei militaris* explicitly relied on past sources and on the model of the Roman army in early days. Read alongside the independent evidence of a height requirement during the High Empire, Vegetius's advice can be safely assumed to represent real policy, at least during the era that his sources record.
6. Isaac (2004) 57–74.
7. Cf. Hippoc. *Aër.*
8. Suet. *Nero,* 19.2.
9. Dositheus, *Hadriani Sententiae,* 2.
10. *CT* 7.13.3.
11. Anon. *De physiognomia* ap. J. André (ed., trans., comm.) *Traité de physiognomonie par un anonyme latin* (Paris, 1981), 2; Ps. Aristot. *Physiog.* 806a; Aulus Gellius *NA* 1.9.2; cf. Barton (1994) 95; Isaac (2004) 149.
12. Cf. Evans (1969); Barton (1994); Isaac (2004) 149–61; Swain and Boys-Stones (2007).
13. *QAM* 57.11–13.6 Müller. For Galen's reading of Hippocrates' *On Airs, Waters, and Places* that follows, see Lloyd (1983) 23, 28–31. The connection between physiognomy and medicine goes back to the fifth century BCE; cf. Misener (1924) 104; Megow (1963) 220; Evans (1969) 17–18; Barton (1994) chap. 3; Isaac (2004) 149–61; Boys-Stones (2007) 94.
14. Boys-Stones (2007) 94.

15. Barton (1994) 98.

16. P. *Oxy.* 1.39.

17. A physician took the military oath, thus becoming a *miles,* albeit a *miles principalis* or *miles immunis* (*Dig.* 50.6.7). Physicians' service counted as *stipendia* and was bound to military law; cf. Nutton (1970) 62. The second-century CE jurist Tarruntenus Paternus includes physicians and other specialists with the *immunes,* which means that they were exempt from certain soldierly duties in return for other services, *CJ* 12.35.6; *Dig.* 4.6.33. For the authority of military physicians to discharge unfit soldiers, cf. *CJ* 12.35.6; *Dig.* 4.6.33.

18. The source is Arrius Menander in his first volume of *On Military Matters, Dig.* 49.16.4.

19. "Menenius libro primo de re militari pr. Qui cum uno testiculo natus est quive amisit, iure militabit secundum divi Traiani rescriptum: nam et duces Sulla et Cotta memorantur eo habitu fuisse naturae." Ibid.

20. Vegetius 1.2, trad. Milner.

21. "Quo loco ea quae a doctissimis hominibus comprobata sunt non ommitam." Vegetius 1.2.2.

22. Previous scholars have rightfully emphasized the Hippocratic origin of these notions and explored their future course within the context of the history of science and ideas in classical antiquity, and within the context of the history of racism in the Greco-Roman world. Jacoby (1911) 518–67; Pohlenz (1938); Heinimann (1945) 13–41; Isaac (2004) 60–9.

23. Vitruvius, I. praef. 3.

24. Vitruvius, 5.3.1.

25. Vitruvius, 5.9.5.

26. Vitruvius, 1.4.1.

27. Vitruvius, 1.4.2.

28. Vitruvius, 1.4.3.

29. Vitruvius, 1.4.4.

30. Davies (1970) 85.

31. Onasander, 8.2.

32. Vegetius 1.22.

33. Vegetius 3.2.

34. Cels. 1.2.3.

35. Vitruvius 1.4.

36. Vegetius, 3.2.

37. Keppie (1996) 376. Dio 55.24 included a detailed account of the legions that existed in his day and their evolution from the time of Augustus; cf. Swan (2004) ad loc.

38. On the frontier system, see Webster (1985) 28–95; Isaac (1987) 125–47; Isaac (1992) 372–414.

39. Tac. *Ann.* 1.2.

40. Dio 54.25.5.

41. Dio 55.23.1.

42. Dio 55.24.9.

43. Dio 55.24.9; Suet. *Aug.* 49.2; cf. Tac. *Ann.* 1.78; Suet. *Calig.* 16; Dio 59.9.6.

44. For the connection between the Roman emperor and the army, Campbell (1984) is seminal. For the emperors' popularity among the troops as a security mechanism against revolts, see Campbell, pp. 17–156, and the use of soldiers' pay and rewards as a political means, pp. 181–98; for the use of the army in politics, see Campbell (2004) 181–92.

45. Wilmanns (1995) 61.

46. For the role of the provincial procurators, see Millar (1964), (1965); Saller (1980); Brunt (1983), (1990) chap. 8.

47. Wilmanns (1995) 13–14.

48. Cf. SHA *Vit. Aurelian* 7.8.

49. Cf. Aemilius Macer: *Dig.* 49.16.12; Suet. *Aug.* 49.2; Dio 52.27; SHA *vita Hadr.* 10.3; Wilmanns (1995) 20.

50. For a discussion of the motives behind this legislation, whether it aimed to serve the interests of the Roman upper class at the time of Caesar, whether it was a popular act, or whether it was designed to guarantee enough physicians for military service, see above.

51. Although writing in the late fourth or early fifth century CE, Vegetius based his treatise about military matters on sources from the first and second centuries CE. As a historian Vegetius was not without faults. He was unaware of some important military changes that followed the establishment of the Dominate and paid little attention to issues of chronology in his use of sources, most of which were from the late Republican to the High Empire period.

52. *Dig.* 4.6.33.2.

53. *Dig.* 50.6.8. This paragraph has led Davies to assume that there was such a thing as a short-term conscription and that it must have been financially lucrative. If he is correct, it proves that there was a constant flow of ideas and practices between military and civic health care; Davies (1970) 93. Davies sees in the third-century physician, Marcus, such an example of a short-term military physician; Marcus did not even take his medical books because of his short term of service. P. *Ross.-Georg.* III, 1, 1–7.

54. Davies (1969) 83.

55. *ILS* 2438=*AE* 1906, 9; Domaszewski (1967) 45; Nutton (1970) 65.

56. *Epigraphica* 1970, 66; *CIL* X 3441=*RIB* 2315*=*CIL* VII 1144.

57. Davies (1972) 2.

58. Ibid.

59. *Dig.* 49.16.12.2. Cf. Vegetius 3.2. Paternus himself was a *praefectus praetorio* in 179 CE. He composed a treatise on military matters (*de re militari*) of which only fragments survived, *Dig.* 49.16.7; 50.6.7. This work is now known only by a quote in Aemilius Macer.

60. For the role of the emperor as general, cf. *RG* 4.2; *IRT* 301; Frontin. *Str.* 1.3.10; Dio 68.23; Fronto, *Ad Verum Imp.* 2.3; *BMC* 3, pp. 497–504=Smallwood *NH* 337; *ILS* 419.

61. Hadrian: SHA *Vit. Hard.* 10.6; Dio, 49.9.1–2; Trajan: Plin. *Pan.* 13; Lucius Verus: Fronto, *Principia Historia* 13=Haines ii, 210.

62. Arrian, *Periplus Maris Euxini* 3.1; 10.3.

63. Cf. Fink (1971) no. 63.

64. Fink (1971) nos. 1 and 2.

65. *PSI* 1307, col. 2.2.

66. There is evidence that some military provinces had a spa that was built for the troops, Davies (1989) 228.

67. Davies (1989) 68; Fink (1971) no. 51, ii/2; Knörzer (1963); Davies (1970).

68. *Hist.* 2.45.

69. Tac. *Ann.* 1.71.

70. Onasander, 1.13–14.

71. Velleius Paterculus, 2.114.1–3; cf. Alexander Severus, SHA *Vit. Sev. Alex.* 47.2. It is noteworthy that Velleius's aim was to praise Tiberius. Likewise, the life of Alexander in the SHA is among the most fanciful of them all. What these two sources give is not a definitive description of reality but a picture of the ideal commander.

72. *CIL* XIII 5208; the *legio XXI Rapax* was stationed between 45/6 CE and 69 CE in Vindonissa. The physician Tiberius Claudius Hymnus had the praenomen and gentilnomen of Claudius and Nero. He had, however, probably been freed, along with his wife Claudia Quieta, by Ti. Claudius Atticus, who was named as their patron. Atticus was probably not a Roman citizen himself before Claudius came to power in 41 CE and therefore could not have freed

Tiberius Claudius Hymnus and his wife. The fact that Hymnus was a freedman is deduced from his cognomen. Hymnus could therefore not have served as a soldier in the legion, since a Roman soldier must have been a freeborn (*ingenuus*). Hymnus could have been an employee of the army without the legal status of a soldier (*miles*). Wilmanns (1995) 190–1.

73. For the treatment of war wounds in the Greco-Roman world, see Salazar (2000).

74. Another place that often necessitated surgical intervention was the gladiatorial arena. At the beginning of his career, Galen was hired by the high priest at Pergamum to act as physician to the gladiators. His duties included, in addition to treating wounds—especially on their arms, thighs and buttocks—overseeing their general health; cf. Nutton (2004) 223; Schlange-Schöningen (2003) 97–102; Moraux (1985).

75. Plut. *Cat. Min.* 70.6.

76. Cels. *De Med.* 7.5.1–5.

77. Salazar (2000) 46–50.

78. Davies (1989) 217; Cels. *De. Med.* 7.5.1–5. For a description of Paul of Aegina, *De Re Medicina* 6.87, who draws on earlier textbooks of the Principate, see Webster (1985) 252–3. For a description of the instruments, see Webster (1985) 260–2. One of the best discoveries of Roman operating tools was made in Baden, an important spa town in Roman times. Cf. Milne (1907) 22.

79. Cels. *De. Med.* 7.5.3.

80. Künzl (1982) fig. 18.10; Majno (1975) fig. 9.15.

81. Cels. *De. Med.* 7.33.1–2; Davies (1989) 217.

82. Wangensteen (1978) 40–1.

83. P. *Ross-Georg.* III, 1, 1–7.

84. Vegetius 2.7 says that the *optio* temporarily takes command if the centurion is ill. Although a physician is not mentioned, the existence of army physicians makes the assumption most plausible that it was they who decided who was ill.

85. P. *Mich.* 468.12–3, 21–3; 477, 35–9; 478, 1–18.

86. "Causari qui militaverunt in leg II Adiutrice pia fidele qui bello inutiles facti ante emerita stipendia excauctorati sunt et dimissi honesta." *AE* (1932) 27=*CIL* XVI 110.

87. Although, on the basis of the evidence collected from the diplomas, there was no general grant of immunities from all local liturgies, there is evidence that veterans benefited from certain immunities: Roxan (1978); Millar (1983) 85. A badly damaged papyrus of the first-century CE records a veteran reciting an edict of Octavian as triumvir that had granted all veterans immunity (from tribute?) for all their property, the citizenship for themselves and families, exemption from further military service, and from performing *munera publica; BGU* II, no. 268; *CIL* XVI, App. no. 10. Another inscription made by a veteran, who claimed to have copied this edict of Domitian from a bronze tablet in the Caesareum in Alexandria, mentioned further immunities; *ILS* 9059; *CIL* XVI, App. no. 12. A papyrus from 172 CE reaffirms the existence of a general exemption from *munera publica:* a veteran settled in the Arsinoite nome complained that he was forced to carry liturgies despite a five-year relief granted to veterans; *BGU* I, no. 180; *SP* II, no. 285.

88. Cf. the sick list of 253–59 CE in Marichal (1979), and P. *Yadin* 723.

89. Fink *RMR* 64 is the only example. However, as Campbell (1994) 110 sqq. argues, it is doubtful whether such a clear distinction between a monthly and a yearly report is possible. A tablet found in Vindolanda may be an interim summary.

90. P. *Dura* 102=Fink *RMR* no. 8.

91. *AE* (1979) 643, with Marichal (1979) 436–52.

92. P. *Lond.* 2851=*CLA* 219, c01.2.44.

93. Bowman and Thomas (1991) 62–73.

94. P. *Mich.* 478, 1–18.

95. Plut. *Marc. Ant.* 50; cf. Septimius Severus's siege at Hatra in 198 CE, Herodian, 3.9.6.

96. For the devastating impact of the Antonine plague, see Duncan-Jones (1996); also Gilliam (1961), 225–51.

97. "Fuit eius fati ut in eas provincias per quas rediit Romam usque luem secum deferre videretur." SHA *Ver.* 8.1.

98. Gal. 19, p. 15 K=*SM* II, p. 96. R. J. and M. L. Littman (1973) 243–55, discusses the evidence of Galen. Religious explanations were common and added to an overall air of anxiety. For example, the plague was a result of opening a golden casket containing the dread vapor in the temple of Apollo at Seleucia; SHA *Ver.* 8.1–2. Avidius Cassius, the Roman general and future usurper who wrongfully sacked Seleucia, was also to blame for breaking a treaty. Lucian has the false prophet Alexander selling magic charms, exploiting the general anxiety; Lucian, *Alex.* 36.

99. Amm. Marc. 23.6.24; Oros. 7.15.5–6; 7.27.7.

100. Vegetius, 3.2; Vegetius might have relied on Onasander, who warns the general not to choose a marshy site for a camp, for such places, by their rising vapors and rank smell, brought disease and infection to the army and both impaired the health of many and killed many, so that the soldiers were left few in number and weakened in strength. Onasander, 8.2. For the plausible influence of Frontinus's lost work on Onasander, see Sander (1929) 1230–1; Schenk (1930) 81–3; Lammert (1939) 136–7; Milner (1995) xxii. For the archaeological evidence, see Jackson (1988) 130, with n. 59.

101. Cf. *CIL* XIII 6621=*ILS* 2602; *CIL* VI 20=*ILS* 2092. For the relations between lay or scientific medicine and temple medicine in the Greco-Roman world, see chapter 2 above.

102. "[Aesc]ulapio [et] Saluti [pro salu]te alae Vet[tonum]." *RIB* 1028=*AE* VII 979.

103. "Asclepio et saluti commitionum." *CIL* VI 20=*ILS* 2092 (Rome).

104. *CIL* XIII 11767.

105. *AE* 1937, 180.

106. *CIL* III 3413 (Aquincum).

107. *CIL* XIII 6621=*ILS* 2602 + addenda.

108. "Aesculapio et Hygiae . . . pro salute sua suorumque et L. Iuli Heliicis qui curam mei diligenter egit secundum deos." *CIL* VI 19=*ILS* 2194 (Rome).

109. *CIL* VI 175 (*cohors praetoria*); *CIL* IX 1617=*ILS* 2117 (*cohors urbana*); *CIL* VI 31145 (*equites singulares Augusti*).

110. Wilmanns (1995) 103–16.

111. For the role of the army in provincial building enterprise, cf. Isaac (1992).

112. Nutton (2004) 172.

113. Nutton and Scarborough (1982) 213–7.

114. Nutton (2004) 175.

115. Gal. 14.2 K.

116. For Crito's career, see Nutton (2004) 256.

117. Wilmanns (1995) 62.

118. Webster (1985) 200. The objections raised by Baker (2002), (2004) revolve around the common shape of the military hospitals, not to their actual being.

119. Cf. Caes. *Bell. Gal.* 6.38; Dio 68.14.2; Tac. *Ann.* 1.65; Davies (1989) 220.

120. Harig (1971) 184.

121. Richmond (1952) 4–5; for epigraphic references to the *valetudinarium,* cf. *CIL* XIII 8009=*ILS* 2458; *CIL* III 14537=*ILS* 9174.

122. Hyginus, *De Munitionibus Castrorum,* 4.

123. Ibid. Hyginus, writing in the late first century CE, said that they were part of every marching camp. His testimony has been accepted by most modern scholars; cf. Bidwell (1997); Johnson (1983); Press (1988). Baker's doubt is not further explained (2004) 84.

124. Davies (1989) 221.

125. Davies (1989) 223–4 with evidence.

126. Ptollion was twice a physician of a *cohors: SEG* 36(1986) 1441; Apollophanes was a physician of an *ala* from Commagene: *CIG* 5057.

127. Davies (1989) 224.

128. Ibid.

129. Koenen (1904). Cf. Bidwell (1997) 71; Press (1988) 69. Webster (1985) 200.

130. SHA *Hadr.* 10.3; *Alex. Sevr.* 47.2. Baker (2004) 87.

131. *CIL* III 14537=*ILS* 9147 (179 CE), cited by Baker.

132. Baker (2004) 85.

133. "Immune in ra(tionem) val(etudinarii) leg(ionis) II Adi(utricis)." AE (1933) 120; Davies (1989) 219.

134. Wright (1964) no. 51.

135. Wright (1963) no. 51.

136. L. Vireius Dexter of *legio I Adiutrix* at Mainz was such a *seplasiarius; CIL* XIII 6778.

137. Cf. *CIL* II 1621; XIII 6778; XIII 8354.

138. Nutton (1970) 63.

139. Tac. *Ann.* 2. 45; an attempt to find out the ratio between soldiers and physicians in the Roman army was undertaken by Wilmanns (1987), who estimates one physician per five hundred Roman soldiers.

140. The rank of the army physicians themselves poses a difficult problem. They were all excused from daily soldierly duties and were eligible for higher pay. Some army physicians were called *medici ordinarii,* which implies they had a centurion's rank. A possible solution to the distinction between physicians who shared equal status with centurions might be that they had joined as distinguished physicians, probably for a shorter period of time. At least some of them originated from the upper social classes if they needed tax immunity at home, like Numisius (*CJ* 53.10.1), or Marcus Valerius Longinus, who was a physician in the Seventh Legion and already a member of his home town council in Drobeta at the age of twenty-three (*CIL* III. 14216, 9). Although centurions themselves did not belong to the upper social classes (the most senior centurions might make it into the equestrian order, but that is true usually only for the *primus pilus*), high rank was the only way the army could have rewarded distinguished physicians whom it recruited. Cf. Sander (1959) 240ff.; Salazar (2000) 80; Nutton (2004) 181–2.

141. *AE* (1934) 44; Marcillet-Jaubert (1982) 73.

142. Jackson (1988) 133.

143. *CIL* VI 37194=*ILS* 9071; *CIL* XIII 7965; Davies (1989) 214.

144. *CJ* 10.53.(52).1.

145. Ulp. *Dig.* 50.4.3.1; Arcad. Char. *Dig.* 50.4.18.29.

146. For the privileges of the veterans, cf. Wilmanns (1987) 181.

147. Cf. *CIL* III 14347, 5; *CIL* III 6747.

148. This is the line of argument of Davies (1970) 85.

149. Q. Marcius Artemidorus, a *medicus castrorum, CIL* VI 31172=*ILS* 2193a (Rome); Asclepiades, *IGRR* I 1212=*CIG* 4766 (Thebes); Hermogenes, *RIB* 461=*CIL* VII, p. 48 (Chester); A. Egnatius Pastor, *RIB* 808=*CIL* VII, p. 85 (Maryport); Alcmius, Lequier, J. (1918): *L'Armée d'Égypte d'Augustue à Dioclétien* (Paris) 491, App. 1, no. 7; M. Aurelius-ocomas, *RIB* 1028=*EE* VII 979 (Binchester); Sex. Titius Alexander, *CIL* VI 20=*ILS* 2092 (Rome); M. Rubrius Zosimus, *CIL* XIII 6621=*ILS* 2602 + addenda (Obernburg); Marcius Callinicius, *AE* 1923, 14 (Carthage); L. Iulius

Helix, *CIL* VI 19=*ILS* 2194 (Rome); Antigonus, Gal. XII 557 K; Axius, Gal. XII 786 K; Callimorphus, Lucian, *quom. Hist. consc.* 16, 24–5; Titus, Flavius Onesiphorus, *CIL* VIII 2874 (Lambaesis); Ti. Claudius Hymnus, *CIL* XIII 5208 (Vindonissa); L. Caecilius Arrianus, *CIL* V 4367 (Brixia); M. Mucius Hegetor, *CIL* III 10854=*ILS* 2601 (Siscia); L. Fabius Anthimus, *CIL* XIII 7415 (Gross-Kronzenburg); Marcus Naevius Harmonius, *AE* (1952) 143 (Rome); Artemidorus, *AE* (1955) 74 (Rome); Antiochus, *JRS* 1969(59) 235, no. 3 (Chester). For the arrival of Greek medicine and physicians into Rome, see chapter 1 above.

150. *SEG* 14(1957) 615 (Rome); *IG* XIV 2547=*RIB* 461=*CIL* VII p. 48 (Britain); *AE* (1969/70) 291 (Britain); Callimorphus, Lucian, *Quomodo historia conscribenda* 16.24=*FGrH* II, no. 210. (Syria Palestina) *OGIS* 207=*IGRR* I 1361=*CIG* 5088=*SEG* VIII 860 (Egypt); *IGRR* I 1212=*CIG* 4766 (Egypt); *IGRR* I 1373=*CIG* 5117=*SB* V 8541 (Egypt).

151. Although it is still debated whether Largus was a military physician, there is no doubt he took part in Claudius's British expedition, Largus, 59, 60; 31, 177; 97, 177; 70, 175, 268, 271. Another doctor on the expedition was C. Stertinius Xenophon.

152. *PIR*[1] III p. 273; Sherwin-White, S. (1978): *Ancient Cos* (Göttingen) 150, 283ff.; Nutton (2004) 254–5, 276.

153. Antigonus, Gal. XII 557 K; Axius, Gal. XII 786 K.

154. Cels. *Med.* Praef. 43.

155. Medical treatment of a soldier on the battlefield was an important enough theme to appear on the Column of Trajan in Rome.

156. *CIL* XI 3007=*ILS* 2542.

157. *CIL* III 14216,9=*ILS* 7150a.

158. Davies (1970) 87.

159. Plin. *HA* 25.20–1.

160. Ibid.

161. Baker (2004) 34.

162. For the role of the Roman army during incidents of urban unrest, cf. MacMullen (1966) 163–241, 255–68; the availability of weapons in local communities is discussed in Brunt (1975); Isaac (1992) 101–60 discusses the role of the army in maintaining internal security in the East.

163. For the relations between army and civilians in the East, see Isaac (1992) 269–310.

164. For the relationship between military camps and local settlements, see MacMullen (1966) 119–25; Campbell (1994) 141–2.

165. Campbell (1994) 121.

166. *Dig.* 49.16.12.1.

167. *Inscriptions from Heraclea Pontica,* no. 7.

168. *Inscriptions from Heraclea Pontica,* no. 2.

169. Cf. Mason (1974); Samama no. 318 ad loc.

170. The preference of the Roman government for physicians who were also *miles* can be deduced from the large number of tomb inscriptions describing the deceased as both a physician and as a *miles;* cf. Wilmanns (1995) 64.

171. Plin. *HN* 25.20–1.

172. The origin of this tradition is Hippoc. *Aër.*

173. The ability of visual imagery to act as semantic vehicles of communication has for long been demonstrated and discussed by art historians and classicists. Cf. Hölscher (2004); Zanker (1988).

CHAPTER FIVE: Medical Tourism during the High Roman Empire

1. Str. 8.6.15.

2. Liv. 45.28.3.

3. A monument remains in Delphi.

4. On Paullus: Liv. 37.46, 57; 38.44ff. 40.25–8; 43.2; 44–5; Polyb. 18, 35; 29–32; Plut. *Aemilius Paullus.*

5. Paus. 2.27.3; 7.27.11.

6. For the connection between the rise of the cult of Asclepius and Hippocratic medicine, see above, chapter 2.

7. On Pausanias, see Habicht (1986); Bearzot (1992); Arafat (1996); Alcock, Cherry, and Elsner (2001); on tourism, see Casson (1973); André and Baslez (1993) chap. 9.

8. Themistius, *Or.* 27 [p. 402, 12–18 Dind.].

9. Vitruvius 1.2.7; Plut. *Mor.* 286D.

10. Origen. *Contra Celsum* 3.3; Tertullianus *De Idolatria,* Cp. 20, and contra, Julianus, *Contra Galilaeos* 235C.

11. Hippoc. *Iust.* 1. For some of the less explicit connections between the rise of Hippocratic medicine and the spread of the cult of Asclepius, see chapter 2 above.

12. Gal. *De Sanitate Tuenda,* 1.8.20.

13. Plut. *Quaestiones Convivales,* 9,14,4; Eunapius *VS* 498.

14. See chapter 2 above.

15. See chapter 2 above,

16. Statius, *Silvae,* 3.4.21.

17. Philostr. *VA* 4.11.

18. Orib. *Medical Collections,* 45.30.10–14.

19. Philostr. *VS* 1.25.4.

20. Philostr. *VS* 2.25.5.

21. Gal. *Subfiguratio Empirica,* Cp. 10, p. 78 [ed. Deichgräber].

22. Herodian 4.8.3.

23. *IGRR IV,* 3620; Magie (1950) 1551. Caracalla wrote a poem of gratitude to Asclepius for his preservation from a shipwreck; Wilhelm (1893) *S.B. Berl. Acad* 836–46; Roman coins showing Asclepius appear as early as 214 CE, *RIC* IV, 1.246 no. 238, 248, 251–3.

24. Cf. Philostr. *VA* 4.34; Aristid. *Or.* 23. 16 K. For the appeal of the Pergamene Asclepieion in earlier times, cf. Str. 2.26.8; Philostr. *VA* 4.34. Edelstein and Edelstein vol. ii. (1945) 249.

25. Habicht (1969) is essential. See also Hoffmann (1998) 47.

26. Habicht (1969) 6–18; Hoffmann (1998) 41.

27. Mart. 9.16.2.

28. The renaissance of the Pergamene Asclepieion is documented by inscriptions (which list the privileges bestowed on its priests and are indicative of imperial favor).

29. Cos. ord. 142 CE; Habicht (1969) 3.9–11.

30. The remodeling of the Asclepieion probably took place between Hadrian's two visits to the Roman province of Asia. For dating, see Habicht (1969) 6–18; Aristid. *Or.* 49. 8–11 K; Swain (1996) 257. Rufinus: Halfman (1979) no. 66; Habicht (1969) 23ff., no. 2; *PIR*^{2} C 1637. Satyrus and Rufinus: *Or.* 50. 28, 43, 83, 84, 107 K; Gal. 2.224.17–225 K; Bowersock (1969) 60–1. Date of reconstruction of the temple of Asclepius: Habicht (1969) 10–11; Le Glay (1976) 347–72.

31. Hoffmann (1998) 46–7.

32. L. Cuspius Pactumeius Rufinus dedicated the temple of Zeus-Asclepius: Behr (1968) 27–8; Aristid. *Or.* 47. 31 K; Magie (1950) 1494; Habicht (1969) 9–10, 142. A. Claudius Charax, from Pergamum, was a contemporary of Aristides. He was also a priest and a consul in 147 CE. In addition to his beneficiary activities in Pergamum, Charax also composed a universal history in forty books, covering especially Greek and (from book 12) Roman history up to the period of "Nero and his successors" (Suda s.v.). The work was later summarized and used by Stephanus of Byzantium under the title *Chroniká.* The fragments relate mostly to mythologi-

cal times, as it was mainly his euhemeristic and allegorical interpretation of the myths that the Byzantines drew on; C. *FGrH* 103 (comm. and add. to 2 AB in 3 B, 741f.). K. Meister in: *DNP* 3, 191. On Charax, see Andrei (1984).

33. Habicht (1969) 3.10, 103–6.

34. Cf. Aristid. *Or.* 42.4; 47.45; 50.46 K; Jones (1998) 69.

35. T. Wiegand, *Abh. Ak. Berlin* (1932) no. 5, 10–11; E. Boehringer in *Neue Deutsche Ausgrabungen* (1959) 158; Le Glay (1976) 350; O. Deubner (1938): *Das Asklepieion von Pergamon* 40–3; imperial festival: *IGR* iv 508; Price (1984) 252–3.

36. Price (1984) 148.

37. Hoffmann (1998) 49.

38. For the acquaintance between Satyrus and Aristides, see above, chapter 2.

39. Aristid. *Or.* 47.62–7 K.

40. Aristid. *Or.* 47.57 K.

41. Aristid. *Or.* 48.34, 38, 42 K.

42. McCrum and Woodhead (1961): *Documents of the Flavian Emperors,* no. 458=*FIR* 1.77=*TAPA* 86(1955) 348–9.

43. Samama (2003) nos. 186–8.

44. See chapter 2 above.

45. Ibid.

46. Samama (2003) no. 185.

47. Asclepiacos as a doctor: Aristid. *Or.* 49. 25 K (Ἀσκληπιακὸν τὸν ἰατρὸν); as a priest: cf. Aristid. *Or.* 49.22 K (ὁ νεωκόρος <ὁ> Ἀσκληπιακός).

48. *CIL* VI 19=*ILS* 2194=Haberling 34. See above, chapter 2.

49. See above, chapter 2.

50. Dodds (1965); Perkins (1994).

51. Cf. Dvorejetski (1997).

52. Plutarch, *Roman Questions* 286D.

53. Vitruvius 1.2.7.

54. Graf (1992) 184, 179; Ginouvès (1994) 237.

55. Croon (1967) 225.

56. Martin and Metzger (1976) 347.

57. Martin and Metzger (1976) 79.

58. Ginouvès (1962) 361.

59. Mee and Spawforth (2001) 248.

60. Branigan (1976) 493; Sanders (1982) 80.

61. Macadam (1999) 198.

62. Croon (1967) 239.

63. Ginouvès (1962) 370; Lambrinoudakis (1994) 225.

64. Croon (1967) 243.

65. Croon (1967) 244. For the connection between the spread of the cult of Asclepius and the rise of Hippocratic medicine, see Gorrini (2005).

66. Jackson (1999) 107.

67. Yegül (2010) 2.

68. Ibid.

69. *Notitina Urbis Regionum,* ca. 334–57; *Curiosum Urbis Romae Regionum,* 357–403.

70. Fagan (1993) 82–3.

71. Aristid. *Or.* 15. 232 K.

72. Scobie (1986) 405.

73. Gansey (1970) 99.

74. Yavetz (1958) 500–17; Scobie (1986) 399–433.

75. For the interesting discussion of sanitation in the Roman world, see Scobie (1986); Thüry (2001); Bradley (2012).

76. Cels. 1.1.2; 1.2.7.

77. Cels. 1.3, 5.5, 9–10.

78. See chapter 1 above.

79. Fagan (1993) 154.

80. Fagan (1993) 151.

81. Cf. Gal. *De Sanitate Tuenda*. Although Galen also noted that bathing is unadvisable in certain circumstances. In addition, Asclepius as well as physicians often prohibited Aristides from bathing, which means that healers understood bathing to have a concrete result rather than an unspecified feel-good effect.

82. Lib. *Or.* 1.200.

83. SHA *Hadr.* 22.7. I do not think this comment indicates that Hadrian saw either the sick as a potential health hazard or the baths as places where one has greater chances of being infected with disease. There is no evidence for such a concern by his contemporaries.

84. *Ep.* 95.22; 22.1; 68.7. Cf. Cic. *Fam.* 14.20.1; Suet. *Aug.* 82.2; Plin. *Ep.* 2.8.2; 7.26.2; Plut. *Mor.* 42b; 122b-137e; Athen. 2.45d; SHA *Tyr. Trig.* 12.7; Fagan (1993) 153.

85. Yegül (2010) 14.

86. Gal. *De parvae pilae exercitu.*

87. Cf. Künzl (1986); Jackson (1990a) 5–27; Fagan (1993) 158.

88. Hom. *Od.* 19.317; Hippoc. *Regimen in Acute Diseases* 65; Villard (1994).

89. Yegül (2010) 40. For the history of the Roman public bath, see Fagan (2001).

90. Jackson (1990b) 2.

91. Yegül (2010) 44.

92. Yegül (2010) 45–7.

93. Machdonald (1986) 111 sqq.; Wallace-Hadrill (2008) 175.

94. Yegül (2010) 48–9. For the relations between Roman baths and Greek *gymnasia,* see Nielsen (1990) 6–35; Yegül (1992) 6–29; Thébert (2003) 45–74.

95. Gruen (1984) 250–72; Ferrary (1988) 496–615; Beard and Crawford (1985) 20–4.

96. Fagan (1999) 85–93; Jackson (1999).

97. Seneca, *Epistulae Morales* 56. 1–2. For archaeological evidence of medical treatment at the baths, see Künzl (1986) 491–509.

98. Cels. 1.2.

99. For the Laconian sweating room, see Vitruvius 5.10.

100. A small oven of burnt clay, which was heated like a bread oven, into which the affected limb was placed. Cels. 3.21.6.

101. Cels. 2.17.1; Str. 5.4.5; Plin. *HN* 31.2; Matrial *Epigrams* 1.62; D'arms (1970) 139–42.

102. Cf. Cels. 2.17.2.

103. Cels. 1.3, 13ff.

104. Jackson (1990b).

105. Cf. Tac. *Ann.* 11.13; 14.22; Str. 5.4.7.

106. Plin. *HN* 31.2.6.

107. Aquae Cutiliae: Cels. 4.12.7; Plin. *HN* 31.6; Aquae Albulae: Vitruvius 8.3.2; Str. 5.3.11; Martial, *Epigrams* 1.12; Suet. *Aug.* 82.2.

108. Plin. *HN* 31.1–2.

109. Jackson (1990b) 1.

110. Vitruvius 8. 4–5; 8. 17; Plin. *HN* 31. 3–8; 31.32–3.

111. Cels. 3.27; 4.2; Plin. *HN* 31.14; 31.33.

112. Plin. *HN* 31.8–9.

113. Books circulated mainly in the vicinity of the big cities, where scholars resided, scholarly activity was undertaken, and libraries were available.

114. Cels. 1.3.4–6.

115. Cels. 1.3.15–16.

116. Cels. 1.3.8–12.

117. Cels. 3.21.6.

118. Cels. 3.22.8.

119. Cels. 3.22.9.

120. Yegül (2010) 50.

121. Cels. 2.17.1; Str. 5.4.5; Plin. *HN* 31.2; Matrial *Epigrams* 1.62.

122. Yegül (2010) 50–1.

123. See chapter 2 above.

124. Dio. 53.30.3.

125. Plin. *HN* 29.5.10.

126. Wallace-Hadrill (2008) 183.

127. *Epistles* 1.15.2–11.

128. Purcell (2010) 579.

129. Purcell (2010) 580. Literature on the various aspects of civic culture in the Greco-Roman world is vast.

130. Purcell (2010) 588.

131. Nutton (2000b) 66.

132. Scobie (1986) 400.

133. For Frontinus, see below, chapter 5.

134. Nutton (2000b) 66.

135. "The praetor has taken care by means of these inderdicts for the cleaning and the repairs of the drains. Both pertain to the health of the citizens and to safety. For drains choke with filth and threaten pestilence of the atmosphere and ruin, if they are not repaired." *Dig.* 43.23.1.2.

136. Rodgers (2004) 15.

137. Frontinus was a *praetor urbanus* in 70 CE (Tac. *Hist.* 4.39) and a *consul suffectus* in 73 CE before succeeding Petilius Cerialis as governor of Britain (*legatus Aug. pr. pr.* Tac. *Agr.* 17.3). In 83 CE he campaigned against the Chatti together with Domitian and in 86 CE Frontinus ascended to the position of proconsul of Asia. Nerva appointed him *Vir publicis sumptibus minuendis* and *Curator aquarum*. He was *cos. II* together with Trajan in 98, in 100 *cos. III,* a rare honor. Frontinus's career is also attested via inscriptions (e.g., *ILS* 6074; 1105). Pliny referred to him as *princeps vir* (*Epist.* 4,8,3) and quoted his instruction not to build a monument for him after his death, because his honor would be his *merita* (*Epist.* 9,19,6).

138. Rodgers (2004) 14–20.

139. Fron. Aq. 1.

140. Fron. Aq. 1.1. On sanitation and health, see Scobie (1986) 399–433; Shaw (1996) 100–38.

141. Fron. Aq. 1.17.

142. Fron. Aq. 8.8.

143. Ibid.

144. Gal. 6.58 K.

145. Nutton (2000b) 69.

146. Orib. *Medical Collections* 9.5, 12.

147. Antyllus, apud Orib. *Medical Collections* 9.9, 11; Gal. 9.10 K.

148. Orib. *Medical Collections* 9.15–20.
149. Nutton (2000b) 70.
150. See chapter 4.
151. Gal. 18A, 348 K.
152. Herodian, 6.6.2.
153. Nutton (2000b) 65.
154. Although the unhealthy climate of the city is a *topos,* there is no reason not to read the testimony of Herodian at face value.
155. Von Staden (2004) 181.
156. Gal. *De anatomicis administrationibus* 1.2.
157. Von Staden (2004) 181. On Galen's later ambiguity toward Alexandria, see Nutton (1993).
158. Rufus, *Quaestiones medicales* 67; Soranus: Suda s.v.
159. Samama (2003) nos. 391–452; Nutton (1993) 13; von Staden (2004) 185.
160. Gal. *De partibus artis medicitivae* 2.3; translated by Malcolm Lyons from a ninth-century Arabic translation. Here quoted from von Staden (2004) 194.
161. See chapter 2 above.
162. On contests in festivals, see Schmitz (1997) 110–1; Mattern (2008) 69–72.
163. Rostovzeff *SEHHW* 1088–94; Cohn-Haft (1956); Hands (1968) 131–45; Nutton (1977) 191; Jackson (2005b).
164. See chapter 1 above.
165. See chapter 1 above.
166. Nutton (1977) 198.
167. Pohl (1905) 42, 45; Nutton (1977) 199.
168. Below (1953) 34–8; Raj (2006).
169. Nutton (1977), p. 192, no. 1=*SEG* 27(1977) 716.
170. Nutton (1977), p. 192, no. 2=*SEG* 27(1977) 717=*AE* (1977) no. 803.
171. Nutton (1977) nos. 48, 82, 23, 25, 28, 32, 34, 47, 59.
172. Nutton (1977) 193–8.
173. I.*Cos* 84–91. In Rome Xenophon was styled *medicus Augusti: CIL* VI 8905=*ILS* 1841.
174. Plin. *HN* 29.5.7; Nutton (2004) 255.
175. Sherwin-White (1978) 283–5; Nutton (2004) 256.
176. Below (1953) 22–40.
177. Nutton (1977) 201.
178. Nutton (1977) nos. 59, 60.
179. *Dig.* 50.9.4.2. The curator was expected to curtail frivolous and unnecessary expenditures by a council.
180. Pius's edict: *Dig.* 27.1.6.2–4; Nutton (1977) 201.
181. Knibbe *JÖAI* (1981/2) 136, no. 146=I.*Eph.* vii, 2, no. 4101. We are, however, not very well informed as to the content of these *agones.* Were they contests of diagnostics, or (more probably) rhetoric?
182. I.*Eph.* iv, no. 1162=Nutton (1977) no. 51=Samama (2003) no. 211.
183. Cf. Iv.*Eph.* 1161–9.
184. For the similarities between the various forms of public competitions between physicians and the culture of the Second Sophistic, see Mattern (2008) 7–10.
185. For the ability of the museum to attract physicians into Ephesus, cf. I.*Eph.* 4101.
186. Magie (1950) 471.
187. Magie (1950) 471 sqq.; for the attitude of Augustus toward the Greek world, see Bowersock (1965); for the administration of the Empire, cf. Lintott.(1993).

188. For Galen's biography, see Nutton (1973) 158–71; Schlange-Schöningen (2003); Boudon-Millot (2007).

189. Gal. *On My Own Books* xiv. 4.

190. For the social status of physicians in classical antiquity, see Nutton (1977); Pleket (1995).

191. For this initial training, cf. Gal. v. 42.4–6 K; vi. 755.12–17 K. For the second part of his education, cf. Gal. *On My Own Books* iv. 4.

192. Boudon-Millot (2007) xxiii.

193. Aischrion: Gal. xi. 24 K; *DPhA* I, p. 97 (A 73); Stratonicus: Gal. v. 119 K; Satyrus: Gal. ii. 225 K; for Quintus's influence on Galen, see: Grmek and Gourevitch (1994) 1491–528.

194. Boudon-Millot (2007) xxviii.

195. Scarborough (1971) 98–111; Moraux (1985); Schlange-Schöningen (2003) 101–36.

196. Gal. xiii. 599. 12 K.

197. Robert (1940) 256, 270–4, 284–6.

198. Wiedemann (1992) 117.

199. Oliver (1989) no. 38. This inscription is discussed above.

200. Oliver (1989) ad loc.

201. Aristid. *Or.* 39 K.

Conclusion

1. The only noteworthy exception was in the Roman imperial army, where physicians were elected by the army itself and the patients were guided toward them; see above, chapter 4.

2. Cf. the somewhat idyllic depiction of life under the Roman Empire during the second century CE in Aelius Aristides *Roman Oration* (*Or.* 26 K).

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